SCCM DASH Plug-in

User's Guide

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Abbreviations

- MC: Management controller.
- DASH: Desktop Mobile Architecture for System Hardware, the new DMTF Commercial Client management standard produced by the DMTF DMWG. Specifies the transport, management protocol (WS-Man), and DMTF CIM profiles used to manage desktop/mobile PC. A "Dash Capable System is a computer system that conforms to the DMTF DASH standard.
- DASH MC: The MC that implements the external DASH protocol stack. It interfaces with other platform components (BIOS, SB, IMDs, …) to get needed information or control the platform.
- SCCM: System Center Configuration Manager.
- DMTF: Distributed Management Task Force , the industry organization developing system management standards such as DASH and WS-Management.
- DASH: Desktop and mobile Architecture for System Hardware is the DMTF standard for client management. DASH is the industry standard for remote, out-of-band management.
- Out-of-band management: Management tasks that are performed independent of the power or OS state on the managed client or system.

Revision History

Date	Revision	Description
June 20th 2008	1.0	First draft
June 28th 2008	1.1	Added new screen images after provisioning is completed. Additional modifications and enhancements
July 14th 2008	1.2	Incorporated input from AMD teams
August 19th 2008	1.3	Added new images and Incorporated inputs from AMD teams
September 18th 2008	1.4	Added new screen shots and Incorporated inputs from AMD teams
October 21st 2008	1.5	Added new screen shots
November 6th 2008	1.6	Screen shots updated for new revision
November 25th 2008	1.7	Added 1.1 feature and new screen shots
December 30th 2008	1.8	Updated screen shots and Incorporated inputs from AMD teams
January 22th 2009	1.9	Updated screen shots

Chapter 1 Introduction

This document describes features and usages of the System Center Configuration Manger (SCCM) DASH plug-in. This document is divided into the following chapters:

Chapter 1 - Introduction

Chapter 2 - DASH Management Node

Chapter 3 - DASH Collection Node

Chapter 4 - Provisioning

Chapter 5 - Discover

Chapter 6 - Power Control

Chapter 7 - Alert

Chapter 8 - DASH Access Account

Chapter 9 - Serial Redirection

Chapter 10 - DASH Explorer

Chapter 11 - DASH Queries Node

Chapter 12 - DASH Reporting Node

1.1 Architecture Overview

The Microsoft System Center Configuration Manager (SCCM) DASH plug-in allows SCCM users to remotely manage client systems that support the DMTF DASH standard. The plug-in uses the DASH standard to enable out-of-band management of these clients. The plug-in supports the following DASH 1.0 capabilities: Discovery, Basic Asset Inventory, Remote Power Control (On/Off), Provisioning, Subscribe to DASH events, Wake on DASH, Boot Device Selection and Serial Redirection. Figure1 below shows an architectural overview of the SCCM DASH plug-in.

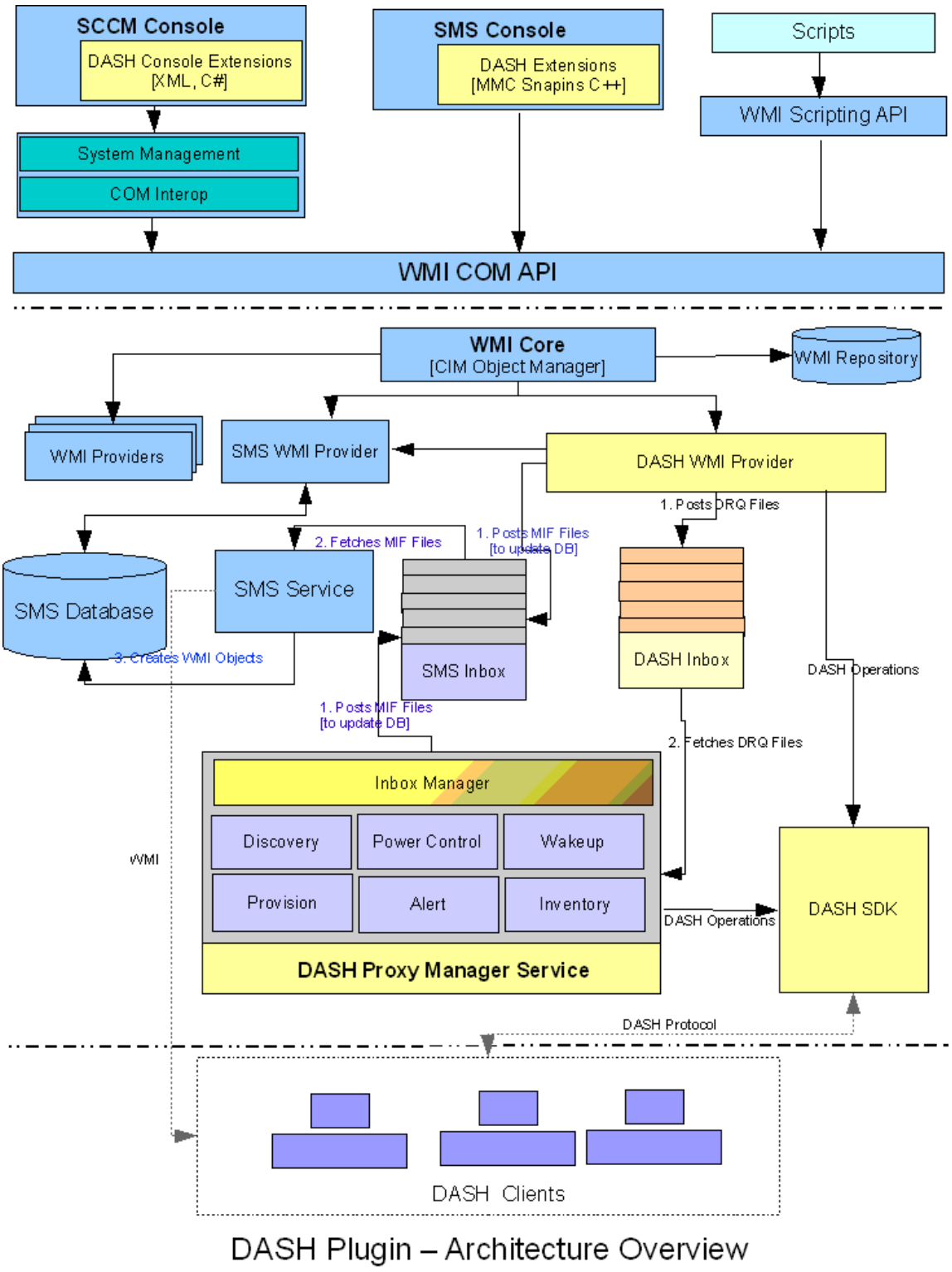

Figure 1. SCCM DASH plug-in Architectural Overview.

1.2 System Requirements

The following are the system requirements to install and use the SCCM DASH plug-in:

1. System Center Configuration Manager 2007 must be installed properly on the target system. For more information on installing Microsoft SCCM 2007, refer to the following URL for hardware and software requirements.
   http://technet.microsoft.com/en-us/library/cc161860(TechNet.10).aspx

2. 28 MB of Free Hard Disk Space.

3. Putty.exe

1.3 Installation

Use the SCCMDASHPlugin.msi installer to install the DASH plug-in for both the SCCM site server and SCCM administrator console only mode.

To install the SCCMDASHPlugin, follow the steps outlined below:

1. Double click on the SCCMDASHPlugin.msi windows installer file.

2. The **"**SCCM DASH plug-in setup" wizard appears as shown in Figure 2 below and then Click on the "Next" button to continue the installation.

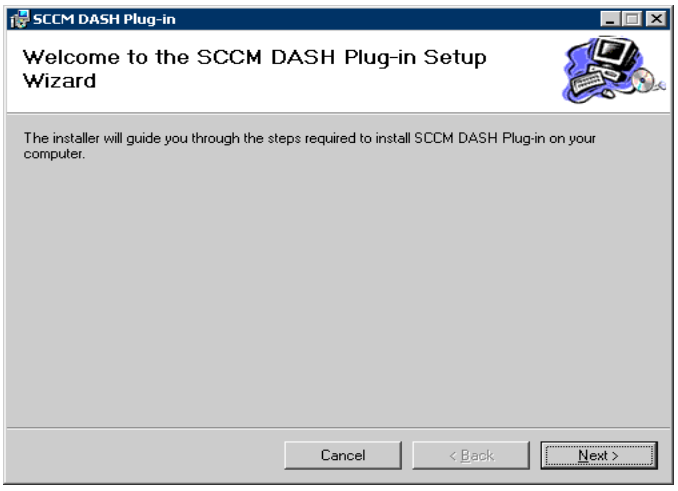
SCCM DASH Plug-in
Welcome to the SCCM DASH Plug-in Setup Wizard
The installer will guide you through the steps required to install SCCM DASH Plug-in on your computer.
Cancel
< Back
Next >

Figure 2. Plug-in Setup Dialog

3. The "license agreement" dialog appears as shown in Figure 3 below. Select "I Agree" radio button to accept the license terms and click on the "Next" button to continue.

SCCM DASH Plug-in
License Agreement
Please take a moment to read the license agreement now. If you accept the terms below, click "I Agree", then "Next". Otherwise click "Cancel".
License Agreement
Copyright (c) 2006, 2007, 2008 Advanced Micro Devices, Inc., GNHSoft Inc., 1E Ltd.
All rights reserved.
Redistribution and use in any form of this material and any product thereof including software in source or binary forms, along with any related
I Do Not Agree
I Agree
Cancel
< Back
Next >

Figure 3. License Agreement Dialog

4. The " Select installation folder" dialog appears as shown in Figure 4 below.

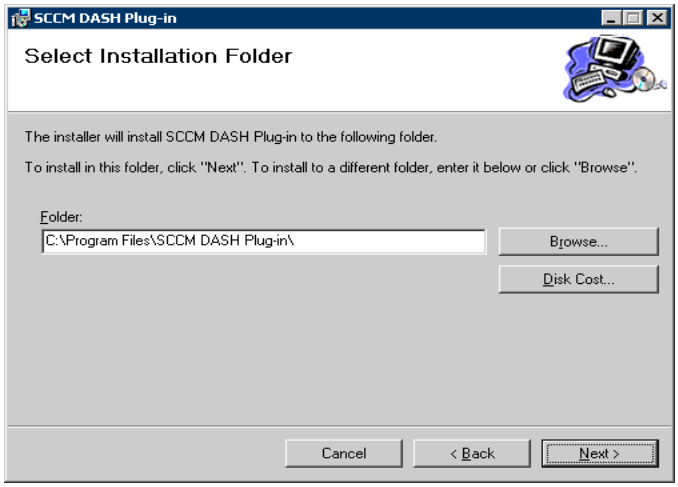
SCCM DASH Plug-in
Select Installation Folder
The installer will install SCCM DASH Plug-in to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\SCCM DASH Plug-in\
Browse...
Disk Cost...
Cancel
< Back
Next >

Figure 4. Select Installation Folder Dialog

5. Specify the destination folder and click "Next" button.

6. The "Confirm installation" dialog appears as shown in Figure 5 below.

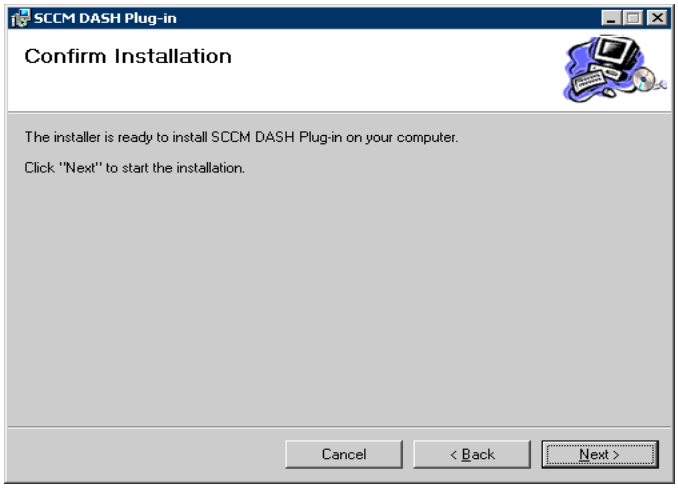
SCCM DASH Plug-in
Confirm Installation
The installer is ready to install SCCM DASH Plug-in on your computer.
Click "Next" to start the installation.
Cancel
< Back
Next >

Figure 5. Confirm Installation Dialog

7. Click "Next" Button.

8. In SCCM DASH Plug-in Configuration Wizard enter the DASH discovery port , Event listener portnumber and the directory where you have installed putty (Ex: C:\Program Files\Putty\) and click "Next" button and click "OK".

   Note:

   If port values are not supplied then default value for DASH discovery port 623 and DASH event listener port 8080 will be taken
   If putty.exe path is not supplied then you have to manually set the environmental variable PUTTY_INSTALL_DIR to point putty.exe and Restart the console

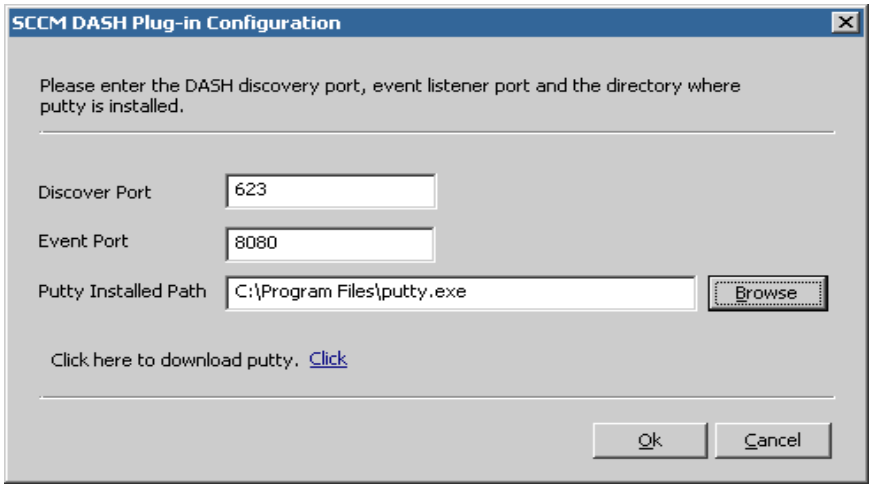

Figure 6. SCCM DASH Plug-in Configuration Dialog

9. The "Installation complete" dialog appears as shown in Figure 7 below.

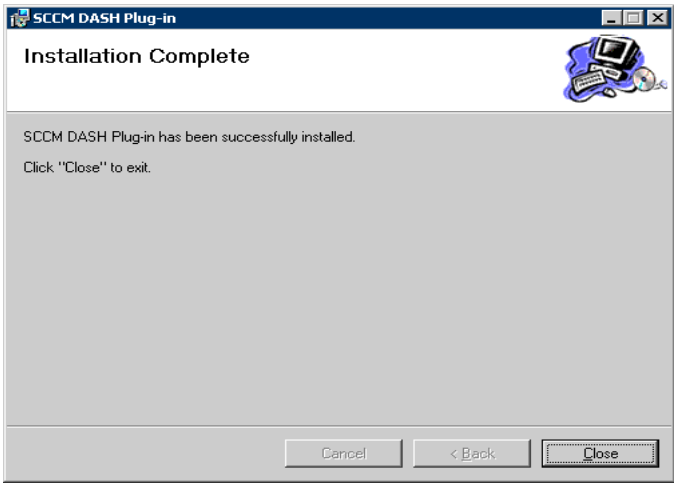

Figure 7. Installation Completion Dialog.

10. Click "Close" button to exit the wizard.

11. Congratulations, you have successfully installed the SCCM DASH plug-in.

1.4 Starting the SCCM DASH plug-in

The SCCM DASH plug-in extends the SCCM Administrator console to support out-of-band management using DASH. The SCCM DASH plug-in installer adds the following nodes to the SCCM console:

- Collections -> All DASH Capable Systems
- Reports -> All DASH Capable Systems
- Reports -> All DASH Capable Systems that are not Clients
- Queries -> All DASH Capable Systems
- Queries -> All DASH Capable Systems that are not Clients
- Tools -> DASH Management

When you right click on collection or individual client, the following menu items will be displayed

- DASH -> Provision -> Create New User (Only in DASH client)
- DASH -> Provision -> Create New Role (Only in DASH client)
- DASH -> Provision -> View User (Only in DASH client)
- DASH -> Provision -> Delete User (Only in DASH client)

- DASH -> Provision -> Delete Role (Only in DASH client)
- DASH -> Discover
- DASH -> Power Control
- DASH -> Alert -> Subscribe
- DASH -> Alert ->Unsubscribe
- DASH -> Set Access Account
- DASH -> Serial Redirection (Only in DASH client)
- DASH -> View DASH Explorer (Only in DASH client)

Figure 8 shows an overview of the SCCM console.

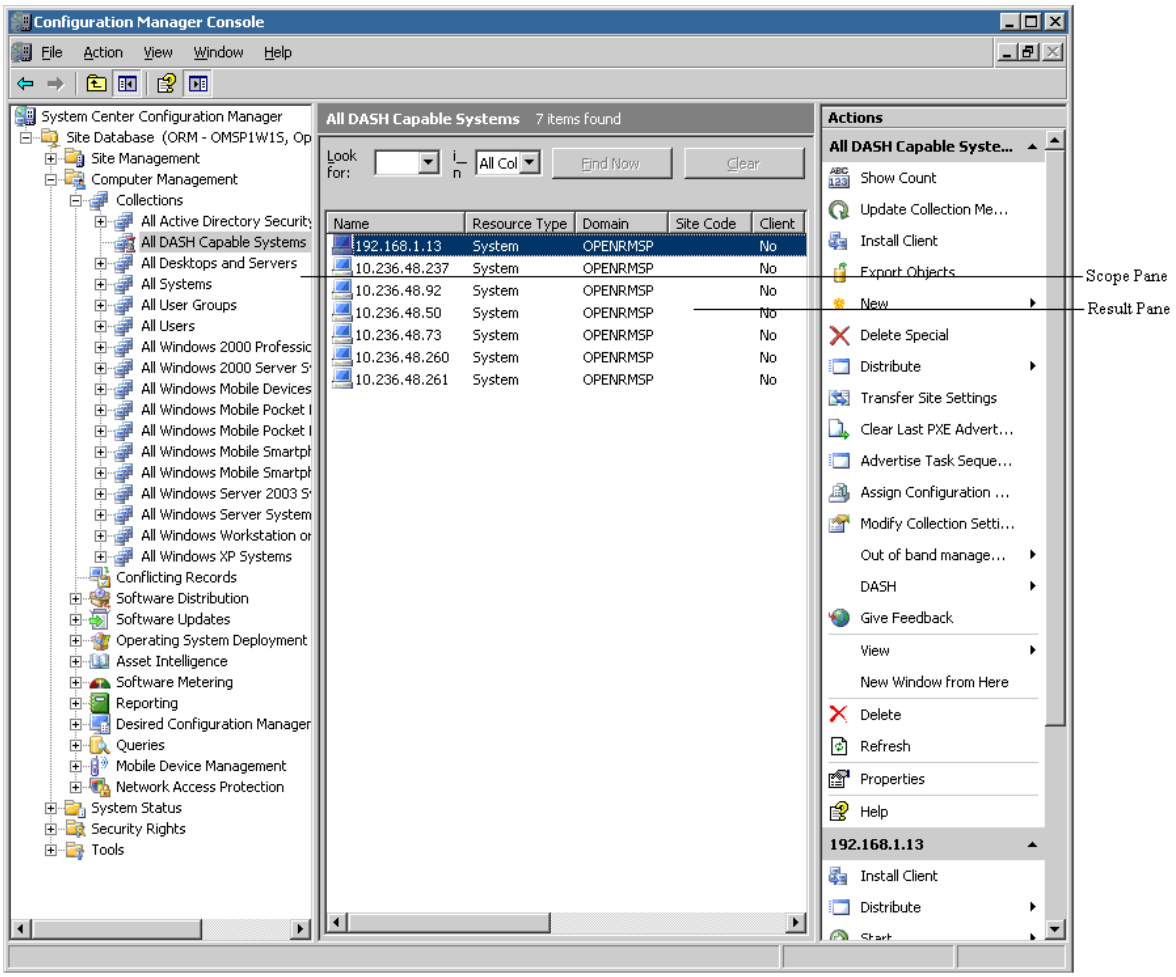

Figure 8. SCCM Administrator Console Overview

1.5 Icons

The standard SCCM DASH plug-in icons are listed in table 1 below:

Icons	Descriptions
Create	The Create icon allows you to create a new user account, a new DASH port or a new inventory schedule.
Modify	The Modify icon allows you to modify existing user accounts or inventory schedules.
Delete	The Delete icon allows you to delete existing user accounts, DASH ports or inventory schedules.
Execute	The Execute icon allows you to retrieve the current power State or current boot device.
Stop Execution	The Stop Execution icon allows you to stop the current query.
Refresh	The refresh icon allows you to retrieve the current status.
Mandatory	The Mandatory icon indicates a field that must be filled in.

Table 1. Icons used in the SCCM DASH Plug-in

Chapter 2 DASH Management Node

The DASH Management node allows you to configure the plug-in and select specific actions such as wake-up, auto discovery, access levels, periodic schedules, etc... It contains the DASH Management property sheet which consists of the following three tabs:

1. General Tab – Allows you to configure wakeup and auto discovery of DASH Capable system.
2. Access Tab – Allows you to configure default user accounts and port numbers that are used to access DASH capable system.
3. Inventory Tab – Allows you to configure periodic schedules to collect inventories of DASH capable system.
4. Serial Redirection Tab – Allows you to set putty path

To access the DASH management properties, follow the steps outlined below:

- Traverse to System Center Configuration Manager -->Site Database -->Tools.
- Expand the Tools node.
- Select the "DASH Management" node.
- Right click and select the "Properties" menu item as shown in Figure 9 below.

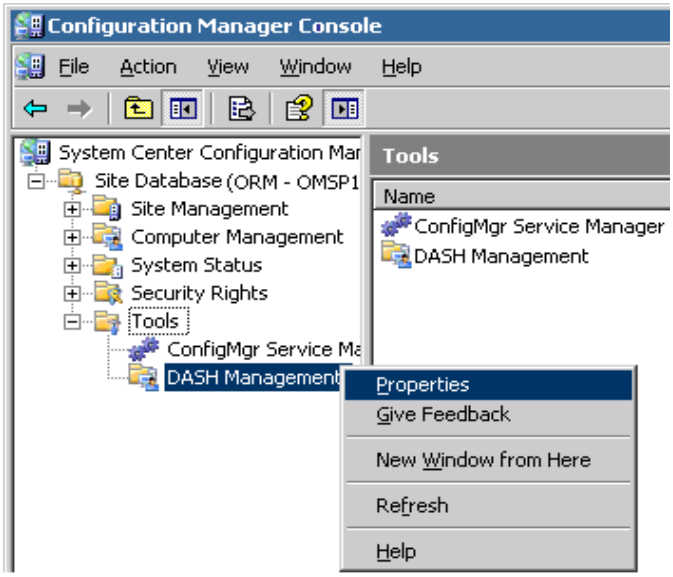

Figure 9. SCCM DASH Management Node

2.1 General Tab

The general tab allows you to configure the DASH wakeup function and set auto discovery for DASH Capable systems. This tab includes the following check-boxes:

1. DASH Wakeup – Once this check-box is checked, SCCM will use DASH to perform the remote wakeup functionality.

2. DASH Discovery – Enables automatic discovery of newly added DASH capable systems. The General Tab is shown in Figure 10 below.

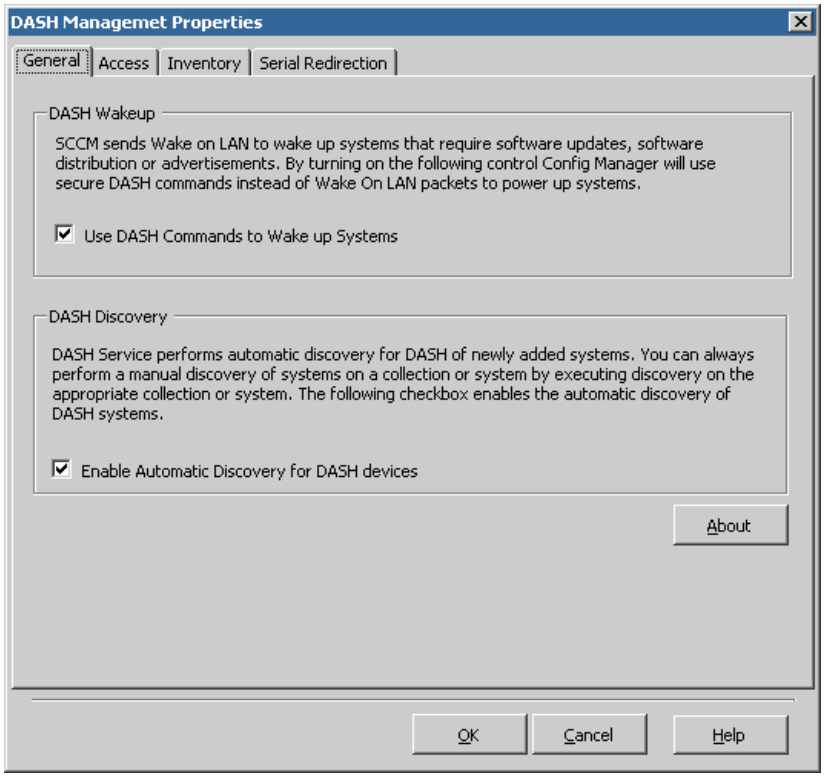
DASH Managemet Properties
General
Access
Inventory
Serial Redirection
DASH Wakeup
SCCM sends Wake on LAN to wake up systems that require software updates, software distribution or advertisements. By turning on the following control Config Manager will use secure DASH commands instead of Wake On LAN packets to power up systems.
Use DASH Commands to Wake up Systems
DASH Discovery
DASH Service performs automatic discovery for DASH of newly added systems. You can always perform a manual discovery of systems on a collection or system by executing discovery on the appropriate collection or system. The following checkbox enables the automatic discovery of DASH systems.
Enable Automatic Discovery for DASH devices
About
OK
Cancel
Help

Figure 10. SCCM DASH Management General Tab

2.1.1 Enabling DASH Wakeup

Check the "Use DASH Commands to Wake up Systems" check-box in the general tab as shown in Figure 10 above to enable DASH Wakeup.

2.1.2 Enabling DASH Automatic Discovery

Check the "Enable Automatic Discovery for DASH Devices" check-box in the general tab as shown in Figure 10 above to enable the discovery.

2.2 Access Tab

The Access tab allows you to configure default user accounts and port numbers that are used to access DASH capable devices. Default accounts are used to access all DASH capable systems that do not have the system access account set. Once system access is completed successfully, the default account is saved as a new system access account. Figure 11 shows the Access Tab.

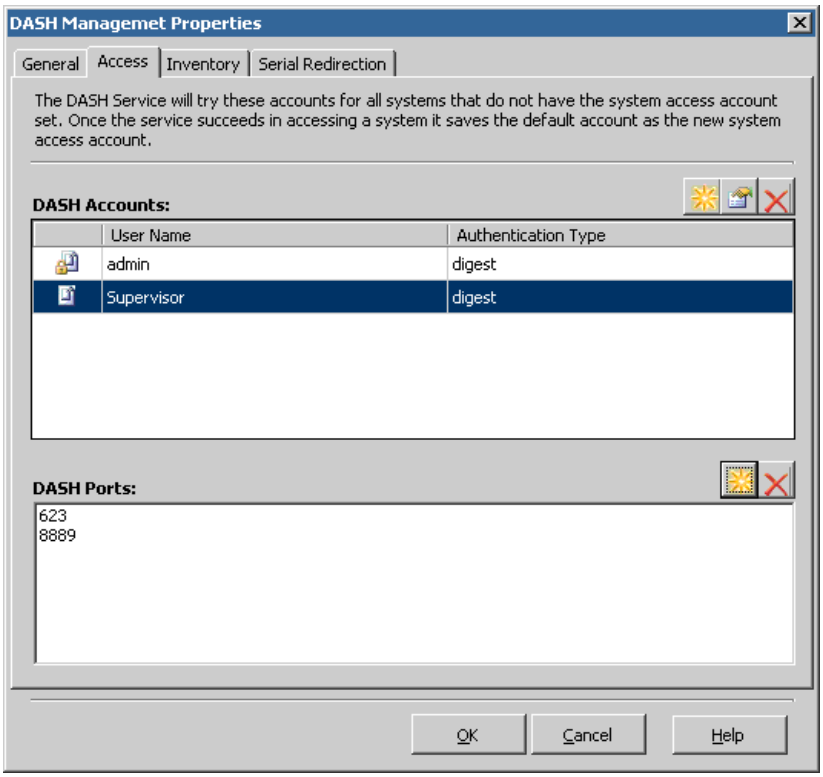

Figure 11. Access Tab

2.2.1 DASH Accounts

This allows you to create a default account with credentials in order to access DASH systems that do not have individual accounts. Once an account with proper credentials is found the account is stored as the System Access Account for future operations until the user overrides explicitly be setting a system Access Account.

2.2.1.1 Creating an Account

Follow the steps outlined below to create a new account:

1. Go to "Access" tab in the DASH Management property sheet.

2. Click the "Create" button

3. The "Add Default DASH Access Account" dialog box appears as shown in Figure 12 below.

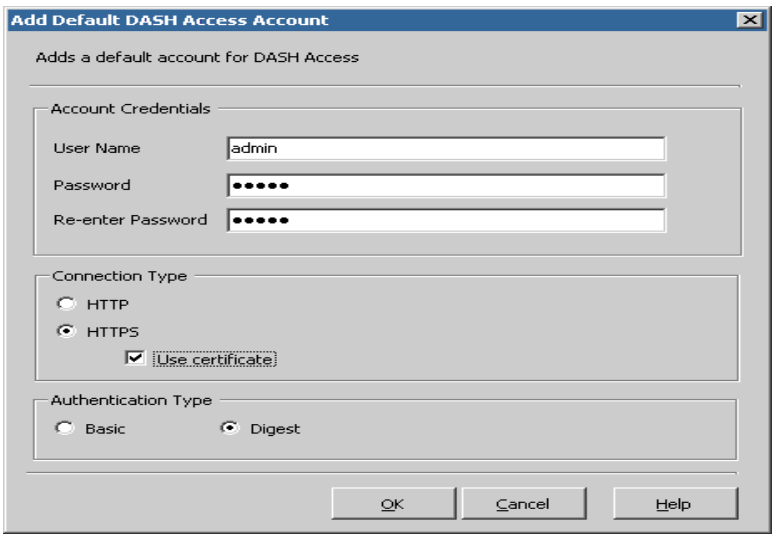

Figure 12. Create New Access Account Dialog Box

4. Enter the user-name, password and connection type and click OK. Refer Table 2 shown below for more information on authentication types.

Field/Option	Description
HTTP	Hypertext Transfer Protocol (HTTP) is a communications protocol. It is used for retrieving inter-linked text documents (hypertext) led to the establishment of the World Wide Web.
HTTPS	Hypertext Transfer Protocol Secure (HTTPS) is a combination of the Hypertext Transfer Protocol and a network security protocol.
Certificate	Security Certificate used for authentication.
Basic authentication	Basic access authentication is a method to allow a client program to provide credentials in the form of a user-name and password when making a request. Before transmission, the user-name and password are encoded as a sequence of base-64 characters. which can be easily decoded because it is not encrypted.
Digest authentication	Digest authentication is intended to prevent unencrypted use of the Basic access authentication, allowing the user identity to be established securely without having to send a password in plain text over the network. Digest authentication is basically an application of MD5 cryptographic hashing with usage of nonce values to prevent cryptanalysis. The MD5 calculations used in HTTP Digest

	Authentication is intended to be "one way", meaning that it should be difficult to determine the original input when only the output is known.

Table 2. Create Access Account Fields

5. Click the "OK" button to apply the changes.

2.2.1.2 Modifying an Existing Account

Follow the below steps to modify an existing account:

1. Go to the "Access" tab in the DASH management property sheet.
2. Select the existing account to be modified and then click on the "Modify" button.
3. The "Modify default DASH Access Account" dialog box appears as shown in Figure 13 below.

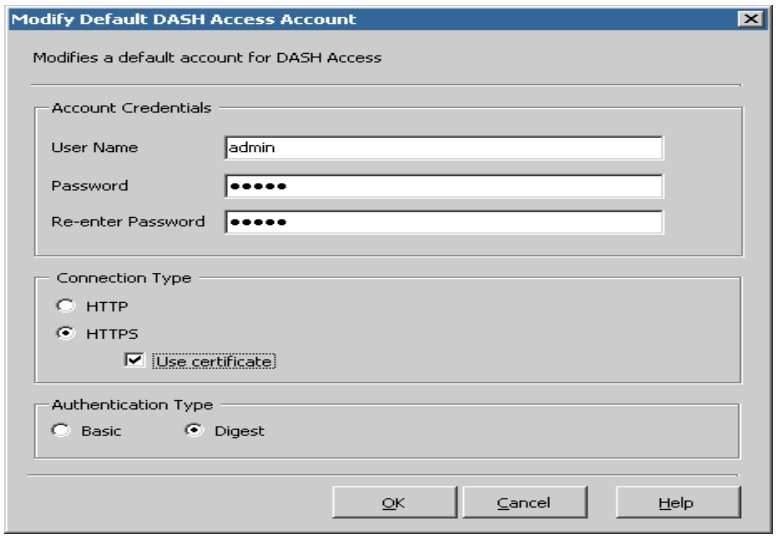

Figure 13. Modify Access Account Dialog Box

4. Change the credentials and click the "OK" button.

2.2.1.3 Deleting an Existing Account

Follow the steps outlined below to delete an existing account:

1. Go to the "Access" tab in the DASH management property sheet.

2. Select the existing account to be deleted.
3. Click the "Delete" button.
4. Click the "OK" button to delete the account.

   Note: Only one account can be added/modified/deleted at a time.

2.2.2 DASH Ports

This allows you to add the default DASH port number in order to access DASH systems that do not have individual port number .

2.2.2.1 Adding Ports

Follow the steps outlined below to add a new port:

1. Go to the "Access" tab in the DASH management property sheet.
2. Click the "Add" button.
3. The "Add DASH Port" dialog box appears as shown in Figure 14 below.

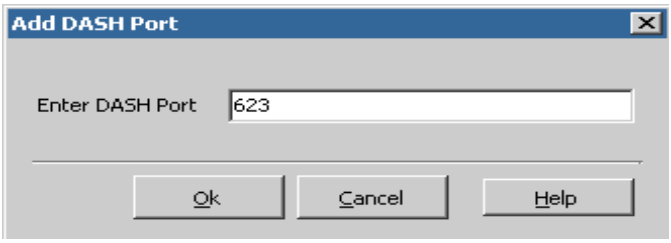

Figure 14. Add New DASH Access Port Dialog Box

4. Enter the desired port number.
5. Click the "OK" button to apply the changes.

2.2.2.2 Deleting Ports

Follow the below steps to delete DASH access port:

1. Go to the "Access" tab in the DASH management property sheet.
2. Select the existing port to be deleted.
3. Click the "Delete" button.
4. Click the "OK" button to apply the changes.

Note: Port number can not be modified.

2.3 Inventory Tab

This allows you to enable/disable DASH information collection then it allows you to set periodic schedules that are used to collect inventories of DASH capable system. Collected inventory information is stored in the hardware inventory database. Inventory collection can be scheduled on a daily, weekly and monthly basis. Using the "Inventory" tab, one can create a new schedule, modify or delete an existing schedule. Figure 15 shows the Inventory Tab.

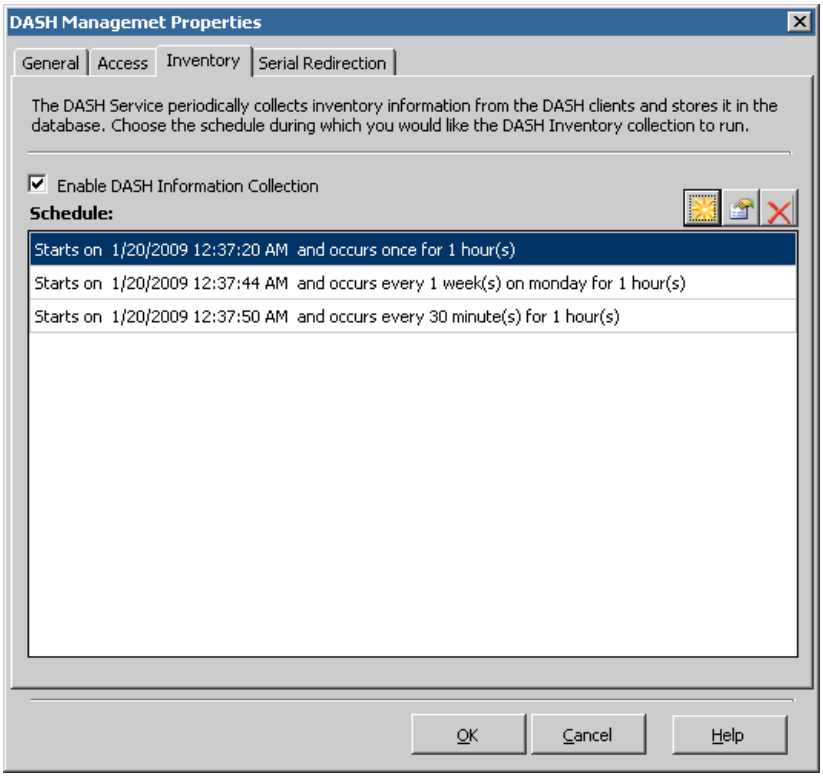
DASH Managemet Properties
General
Access
Inventory
Serial Redirection
The DASH Service periodically collects inventory information from the DASH clients and stores it in the database. Choose the schedule during which you would like the DASH Inventory collection to run.
Enable DASH Information Collection
Schedule:
Starts on 1/20/2009 12:37:20 AM and occurs once for 1 hour(s)
Starts on 1/20/2009 12:37:44 AM and occurs every 1 week(s) on monday for 1 hour(s)
Starts on 1/20/2009 12:37:50 AM and occurs every 30 minute(s) for 1 hour(s)
OK
Cancel
Help

Figure 15. Inventory Tab

2.3.1 Enabling/Disabling DASH Inventory Collection

Follow the steps outlined below to enable or disable DASH inventory collection.

1. Go to the "Inventory" tab in the DASH management property sheet.
2. Enable/Disable "Enable DASH Information Collection" check-box.
3. Click the "OK" button to apply the changes.

2.3.1.1 Adding a New Schedule

Follow the steps outlined below to add a new schedule.

1. Go to the "Inventory" tab in the DASH management property sheet.
2. Click the "Add" button.
3. The "Schedule" dialog box appears as shown in Figure 16 below.

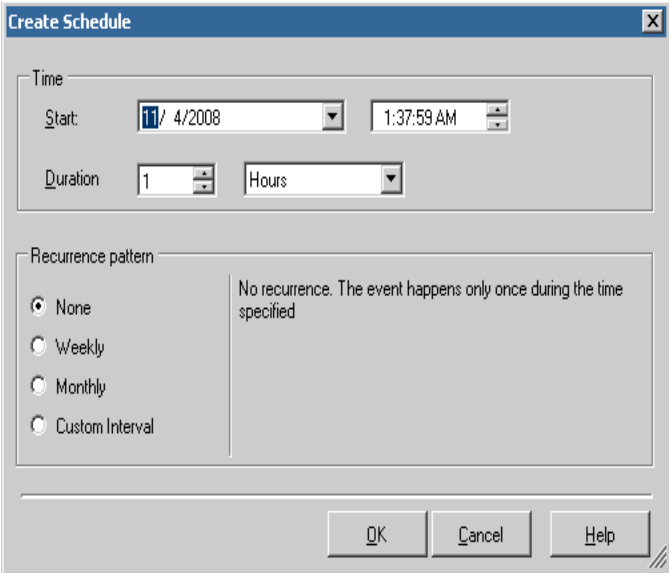

Figure 16. Create Schedule Dialog Box

4. Enter the start date, time, duration and recurrence pattern.
5. Click the "OK" button to apply the changes.

2.3.1.2 Modifying schedules

Follow the steps outlined below to modify an existing schedule:

1. Go to the "Inventory" tab in the DASH management property sheet.
2. Select the schedule that is to be modified.
3. Click the "Modify" button
4. The "schedule" dialog box appears as shown in Figure 17 below.

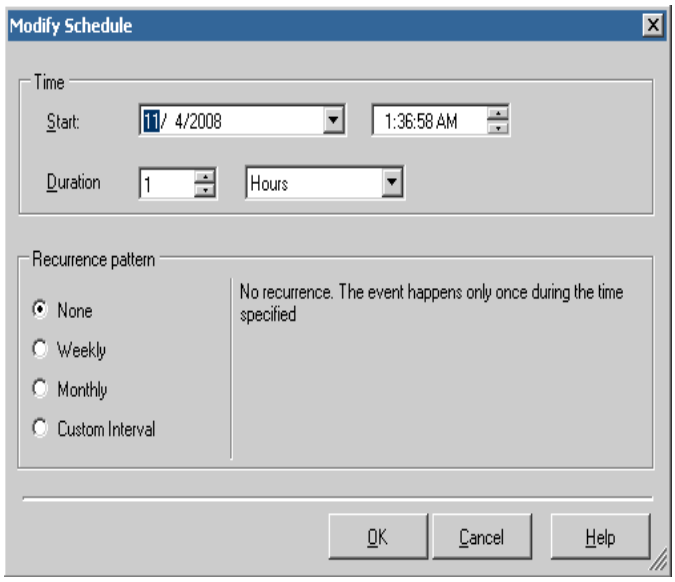

Figure 17. Modify Schedule Dialog Box

5. Enter new start date, time, duration and recurrence type.
6. Click the "OK" button to apply the changes.

2.3.1.3 Deleting a schedule

Follow the steps outlined below to delete any schedule:

1. Go to the "Inventory" tab in the DASH management property sheet.
2. Select the schedule to be deleted.
3. Click the "Delete" button.
4. Click the "OK" button to delete the selected schedule.

2.4 Serial Redirection Tab

This allows you to set putty path if you have not supplied during SCCM Plug-in installation. The Serial Redirection Tab is shown in Figure 18 below.

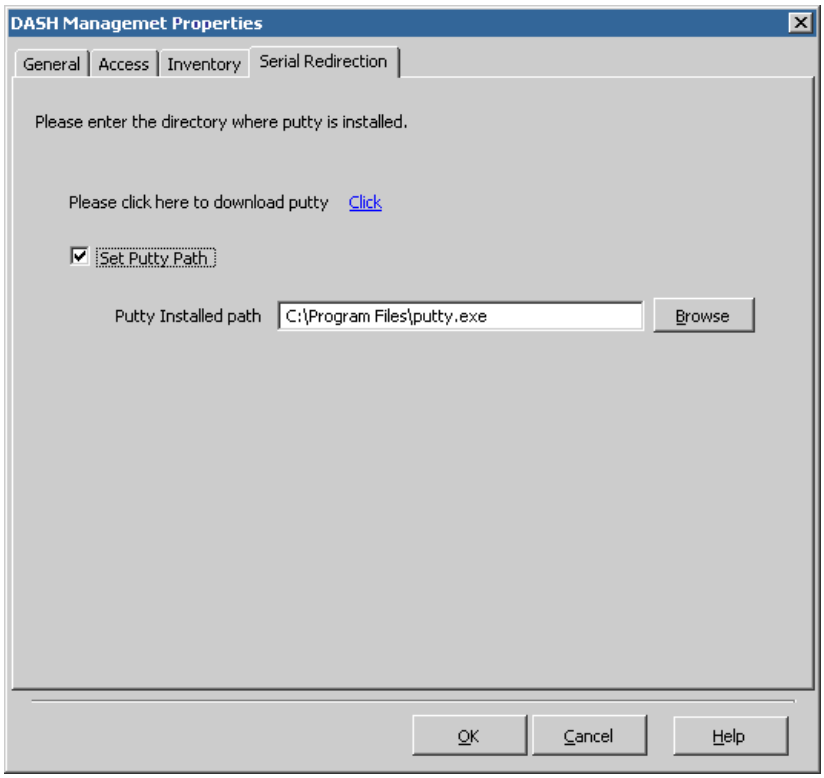

Figure 18. Serial Redirection Tab

Chapter 3 DASH Collection Node

The SCCM DASH plug-in creates a collection node that contains "All DASH capable systems".

Follow the below steps to view DASH capable systems.

1. Traverse to System Center Configuration Manager -->Site Database -->Computer Management -->Collections.
2. Click the "All DASH Capable Systems" collection.
3. DASH capable systems are displayed in the result pane as shown in Figure 19 below.

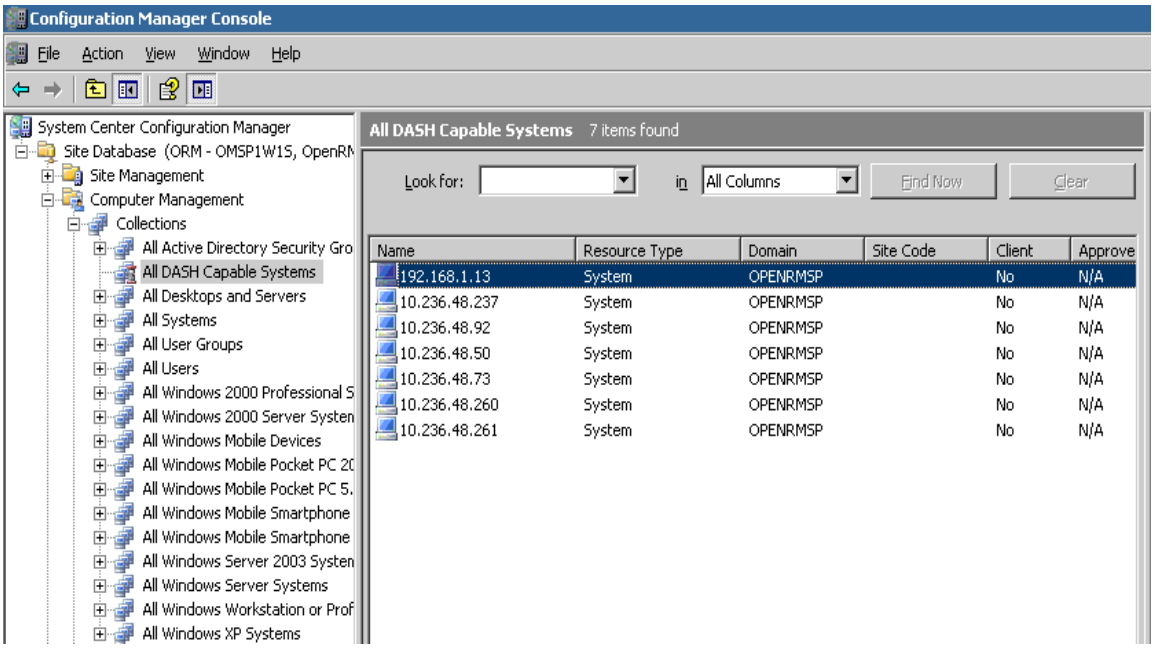
Configuration Manager Console
File Action View Window Help
System Center Configuration Manager
Site Database (ORM - OMSP1W1S, OpenRM
Site Management
Computer Management
Collections
All Active Directory Security Gro
All DASH Capable Systems
All Desktops and Servers
All Systems
All User Groups
All Users
All Windows 2000 Professional S
All Windows 2000 Server Systen
All Windows Mobile Devices
All Windows Mobile Pocket PC 2
All Windows Mobile Pocket PC 5.
All Windows Mobile Smartphone
All Windows Mobile Smartphone
All Windows Server 2003 Systen
All Windows Server Systems
All Windows Workstation or Prof
All Windows XP Systems
All DASH Capable Systems 7 items found
Look for:
in All Columns
Find Now
Clear
Name Resource Type Domain Site Code Client Approve
192.168.1.13 System OPENRMSP No N/A
10.236.48.237 System OPENRMSP No N/A
10.236.48.92 System OPENRMSP No N/A
10.236.48.50 System OPENRMSP No N/A
10.236.48.73 System OPENRMSP No N/A
10.236.48.260 System OPENRMSP No N/A
10.236.48.261 System OPENRMSP No N/A

Figure 19. All DASH Capable Systems Collection Node

Chapter 4 Discover

The SCCM DASH plug-in discover feature allows the discovery of DASH capable systems within a collection or the discovery of an individual system.

4.1 Discovering a Collection

The SCCM DASH Plug-in discover feature allows you to automatically discover DASH capable systems within a collection.

Follow the steps below to discover DASH capable system in a collection.

1. Traverse to Start System Center Configuration Manager -->Site Database--> Computer Management ->Collections.

2. Right click on the collection in which you want to discover all the DASH capable systems.

3. Select DASH -->Discover context menu as shown in Figure 20 below.

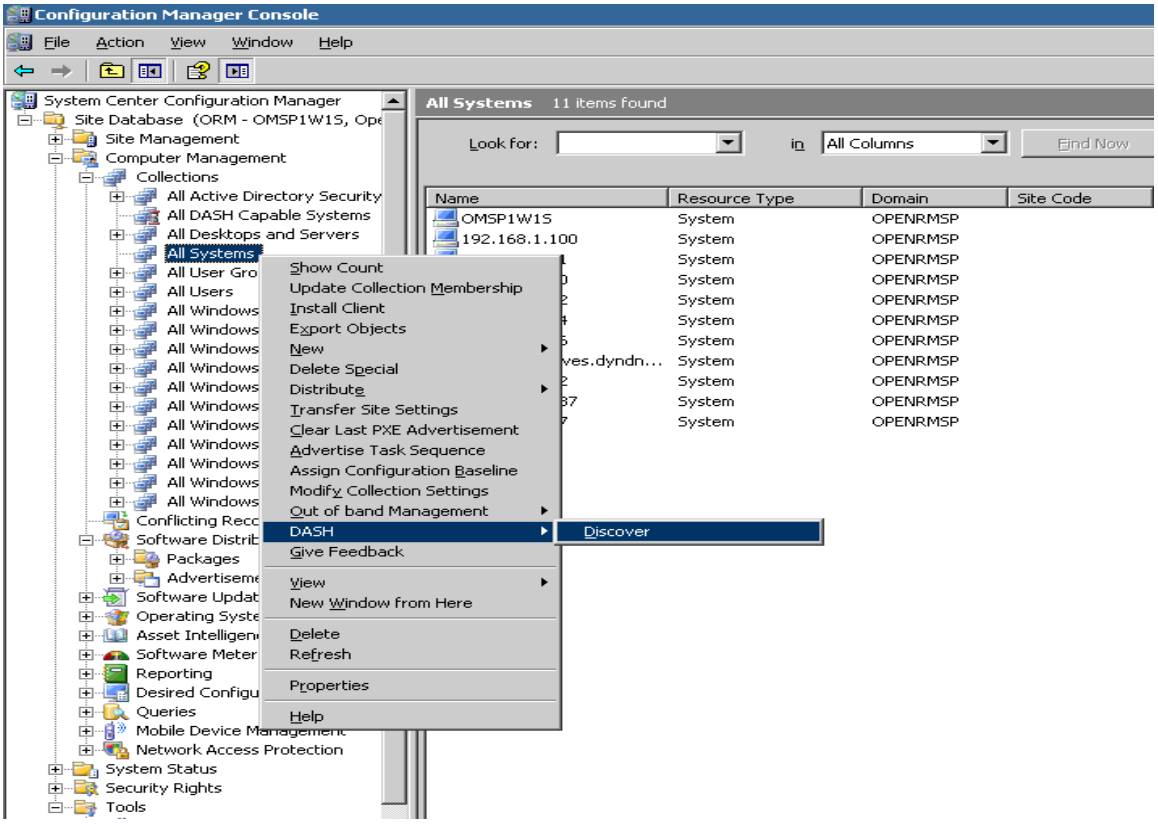

Figure 20. Discover Context Menu for Collection

4. The "Discover Collection" dialog box appears as shown in Figure 21 below.

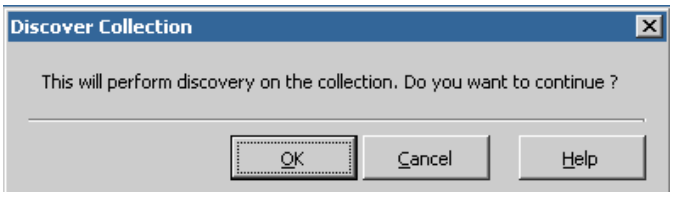

Figure 21. Discover Dialog Box for Collection

5. Click on the "OK" button to discover DASH capable systems in the collections.

4.2 Discovering a Client

You can use this feature to discover a single DASH capable system.

Follow the steps below to discover the individual DASH capable system.

1. Traverse to System Center Configuration Manager -->Site Database -->Computer Management-->Collections.
2. Select the Collection that contains the DASH capable system that needs to be discovered.
3. Select the system and right click to display the context menu.
4. Traverse to DASH --> Discover menu item as shown in Figure 22 below.

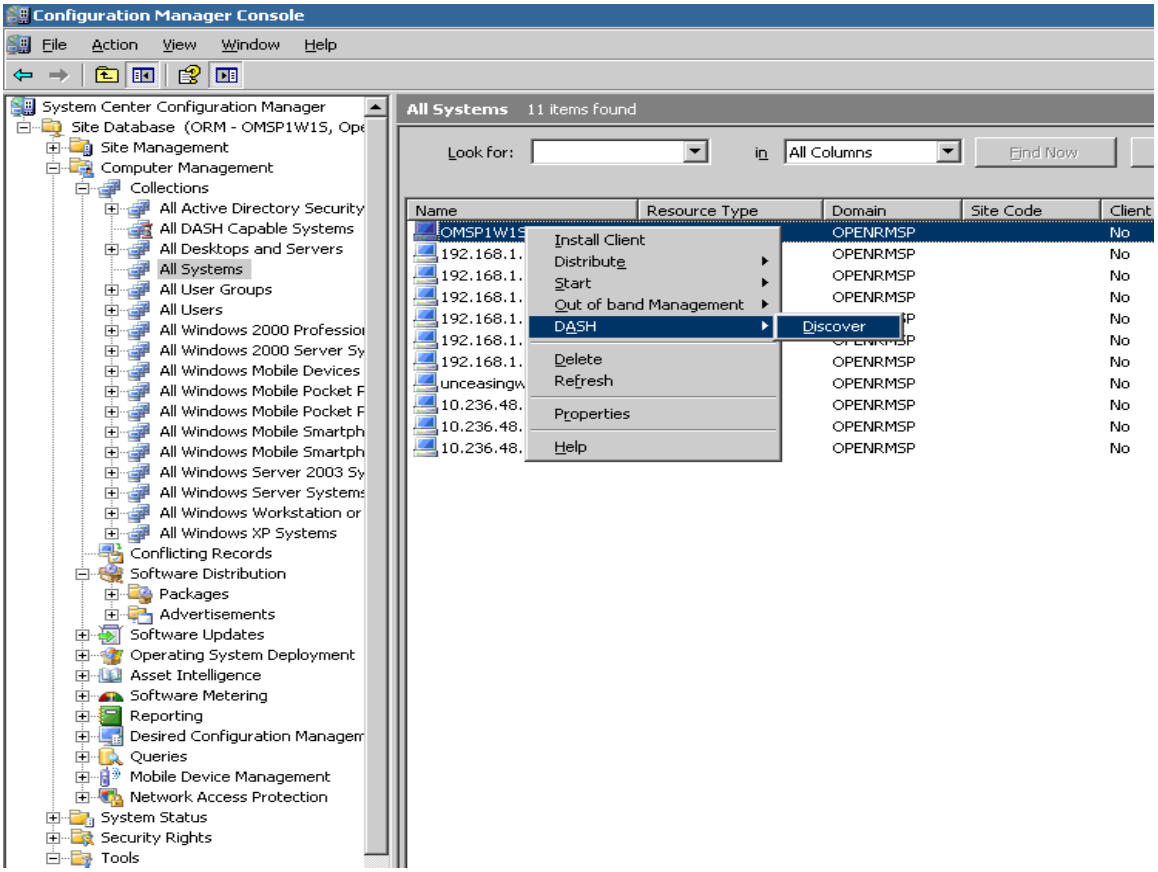

Figure 22. Discover Context Menu for Client

5. The "Discover System" dialog box appears as shown in Figure 23 below.

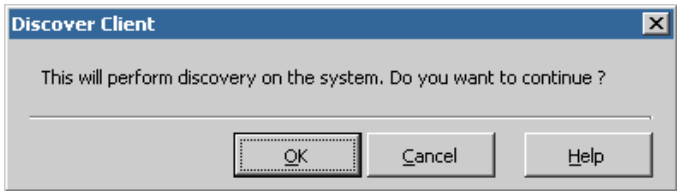

Figure 23. Discover Dialog Box for Client

6. Click the "OK" button to discover the system's DASH capability.

After discovery is completed, the following two properties in the system properties are populated.

1. Dash Capable <yes/no>

2. Dash Port<Port Number>

Chapter 5 DASH Access Account

Managing access control for managed resources and management operations is an important aspect of the secure management for DASH. Authorization and access control is based on the roles assigned and privileges associated with the user accounts. The SCCM DASH plug-in provides the mechanism to configure DASH access accounts for both a collection and an individual system. This is used by the DASH Plug-in when performing DASH operations.

5.1 Configuring an Access Account for a Collection

Follow the steps outlined below to configure DASH Access Account for a collection.

1. Traverse to System Center Configuration Manager -->Site Database -->Computer Management -->Collections.

2. Right click on the collection for which the DASH access account is to be set

3. Select DASH --> Set DASH Access Account context menu as shown in Figure 24 below.

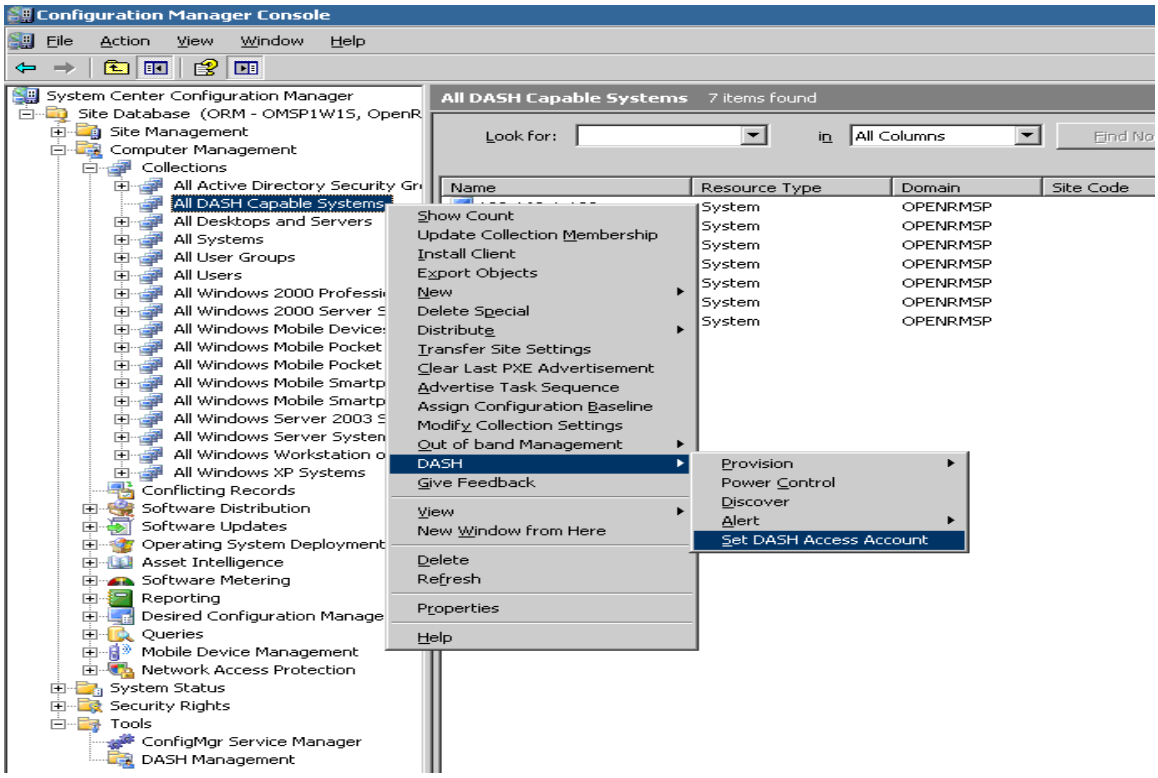

Figure 24. Set DASH Access Account Context Menu for Collection

4. The "Set DASH Access Account Collection" dialog box appears as shown in Figure 25 below.

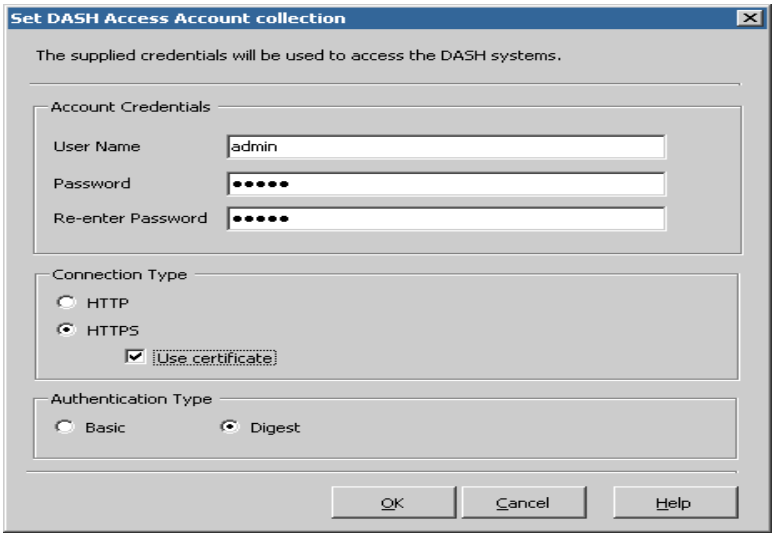

Figure 25. Set DASH Access Account Dialog Box for Collection

5. Enter the user-name, password and connection type . Refer Table 2 for more information about authentication types.

6. Click the "OK" button to create the new account.

5.2 Configuring an Access Account for a Client

Follow the steps outline below to configure DASH Access Account.

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management-->Collections.

2. Select the collection which contains the desired DASH client

3. Select the DASH capable system and right click to display the context menu.

4. Select DASH --> Set DASH Access Account context menu as shown in Figure 26 below.

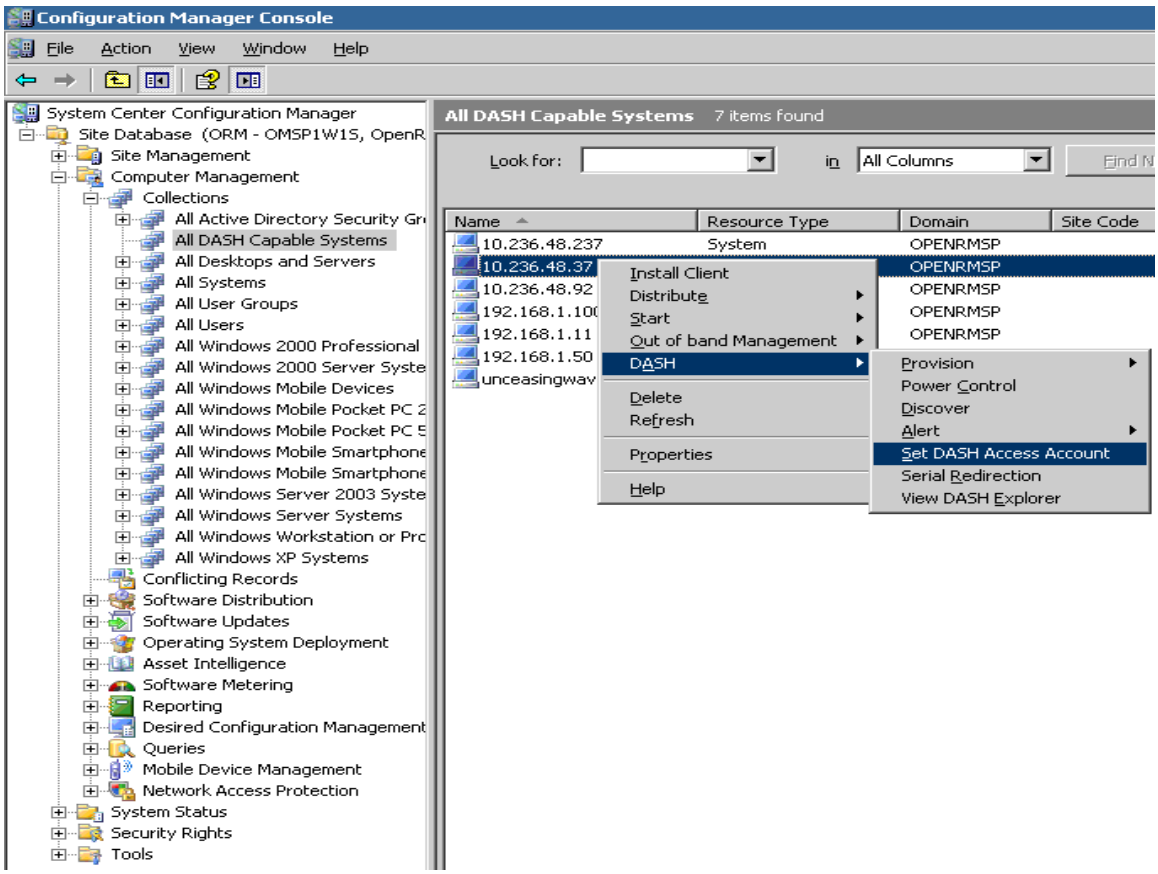

Figure 26. Set DASH Access Account Context Menu for Client

5. The "Set System DASH Access Account" dialog box appears as shown in Figure 27 below.

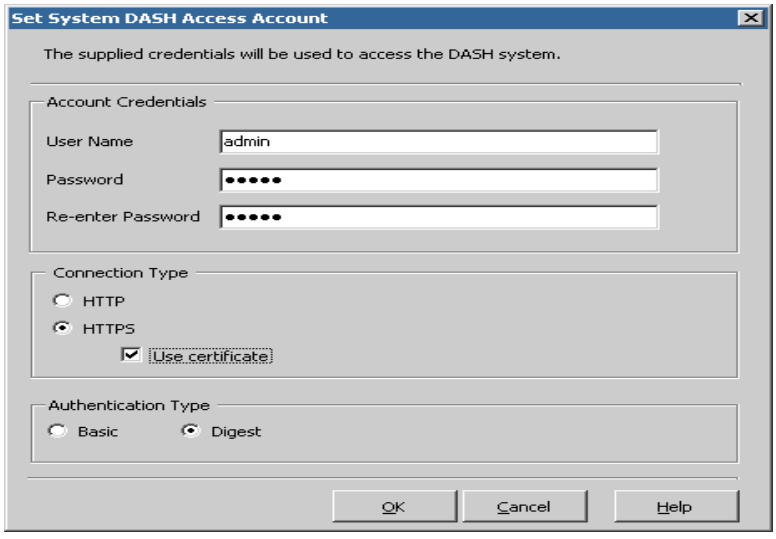

Figure 27. Set DASH Access Account Dialog Box for Client

6. Enter the user-name, password and connection type . Refer Table 2 for more information about authentication types.

7. Click the "OK" button to create the new account
(Note:The "Set DASH Access Account " is used for an individual system only. This account is used by the SCCM DASH plug-in for DASH related operations.)

Chapter 6 Provisioning

The SCCM DASH plug-in provisioning feature allows you to setup the security credentials in the DASH MC (management controller) for a client system. Setting these credentials allows you to securely manage the system out-of-band using DASH. You can configure security credentials for the following:

1. A group of DASH systems in a collection.
2. An individual DASH system.

6.1 Collection Provisioning

The SCCM DASH plug-in allows you to create a DASH access account for a group of DASH capable systems in a collection.

More information on collection provisioning is included in the following sections.

6.1.1 Creating user account

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management -->Collections.
2. Right click on the collection for which you want to create DASH accounts.
3. Select DASH--> Provision --> Create New User menu item as shown in Figure 28 below.

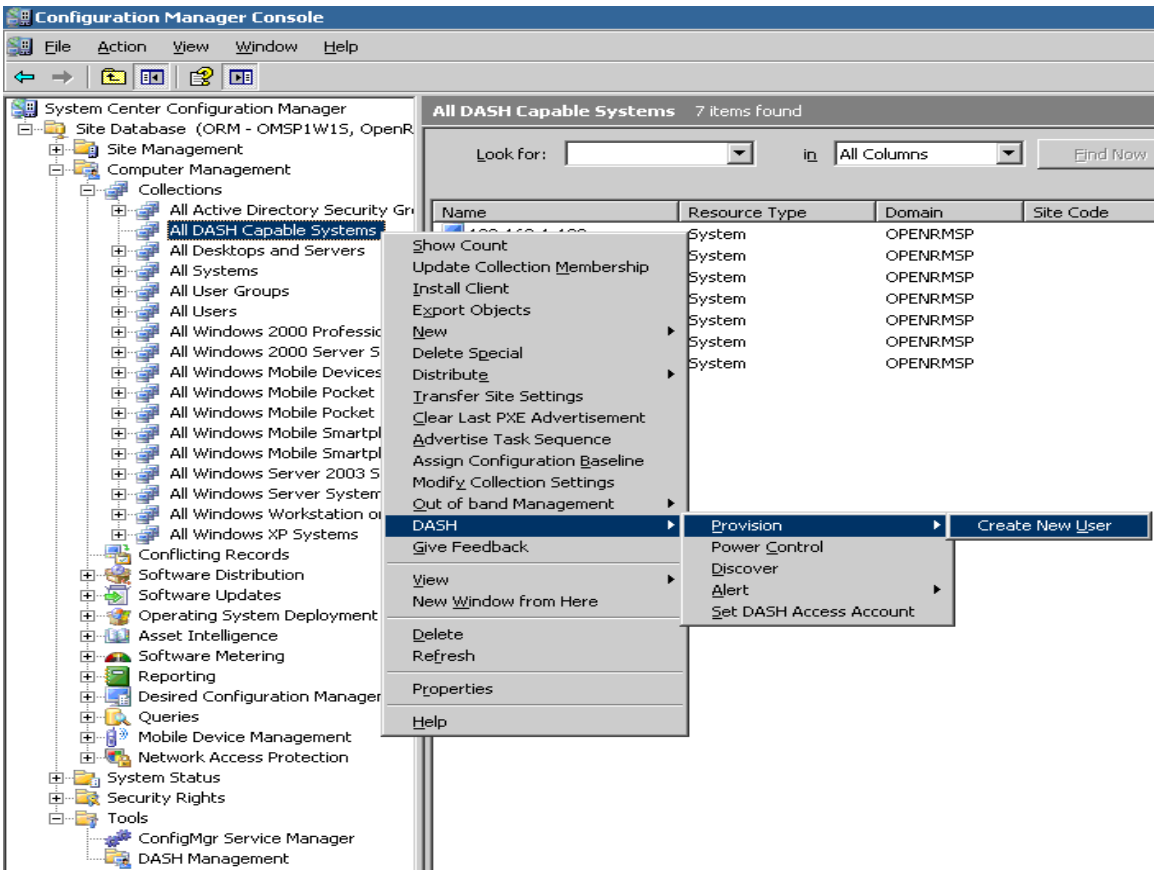

Figure 28. Collection Provisioning

4. The "Create DASH Account" dialog box appears as shown in Figure 29 below.

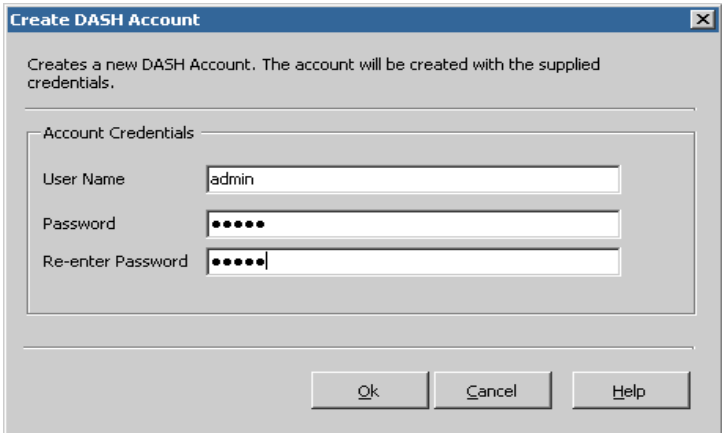

Figure 29. Create DASH Account Dialog Box for Collection

5. Enter the user-name and password.

6. Click the "OK" button to create the new account.

6.2 Provisioning a Client

The SCCM DASH plug-in allows you to create a DASH account for an individual system. Follow the steps outlined in the following section to create a new account.

6.2.1 Creating user account

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management-->Collections.
2. Select the collection that contains the desired DASH capable system.
3. Select the DASH capable system and right click to display the context menu.
4. Select DASH-->Provision -->Create New User menu item as shown in Figure 30 below.

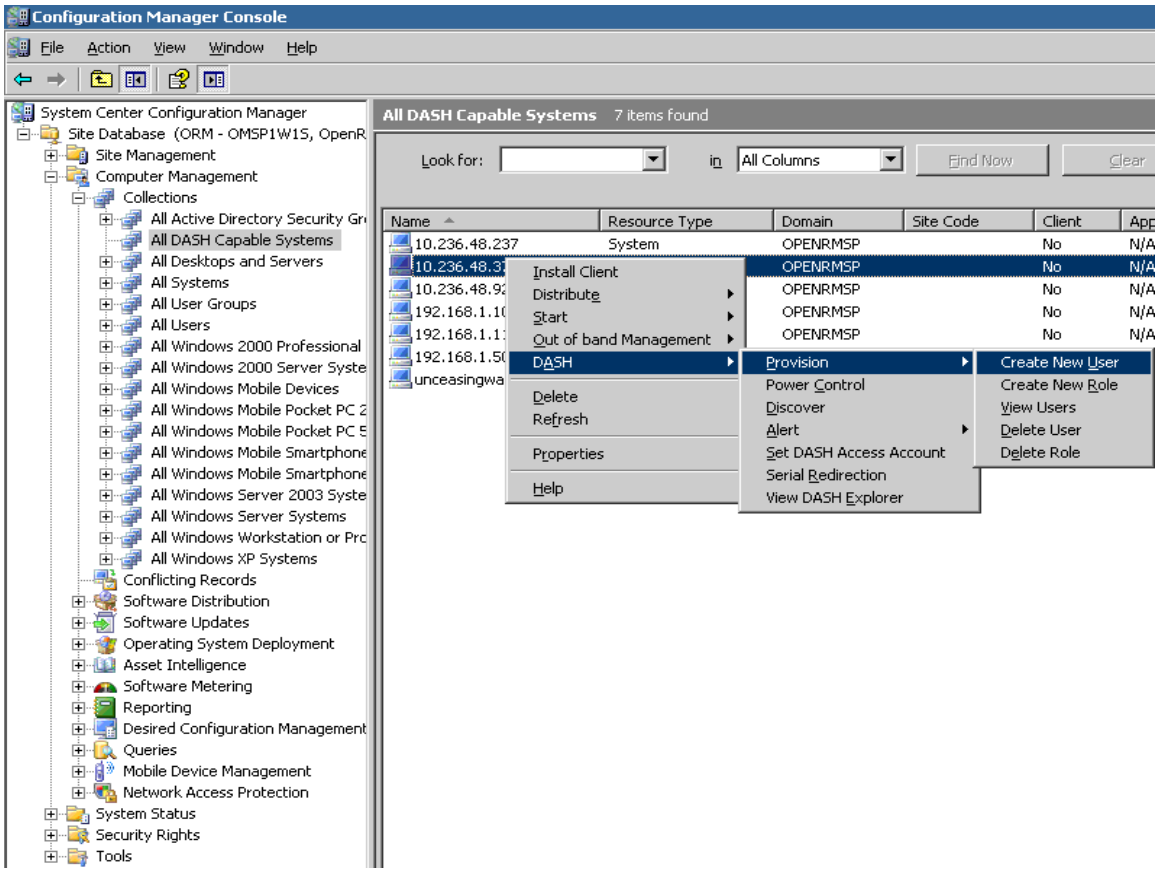

Figure 30. Client Provisioning

5. The "Create DASH Account" dialog box appears as shown in Figure 31 below.

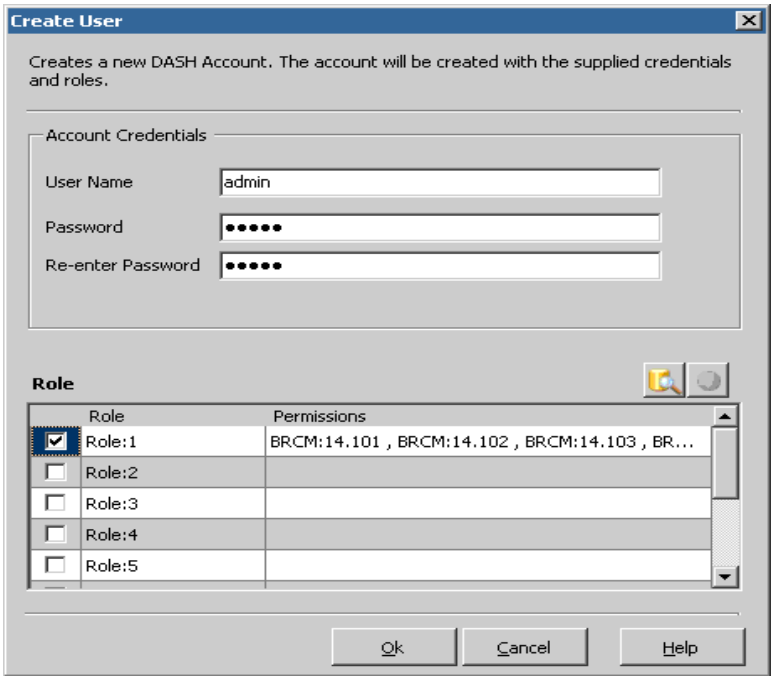

Figure 31. Create DASH Account Dialog Box for Client

6. Enter the user-name, password and click query button and it will display the list of roles available.

   (Note:You can select and assign any available role for the new account based on the requirement)

7. Click the "OK" button to create the new account.

   (Note**:**This option allows you to create a new account in the DASH capable system)

6.2.2 Creating New Role

This feature lets you to create new roles with desired permission and activity.

Follow the steps outlined below to create a new roles.

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management-->Collections.

2. Select the collection that contains the desired DASH system.

3. Select the DASH capable system and right click to display the context menu.
4. Select DASH-->Provision -->Create New Role menu item as shown in Figure 32 below.

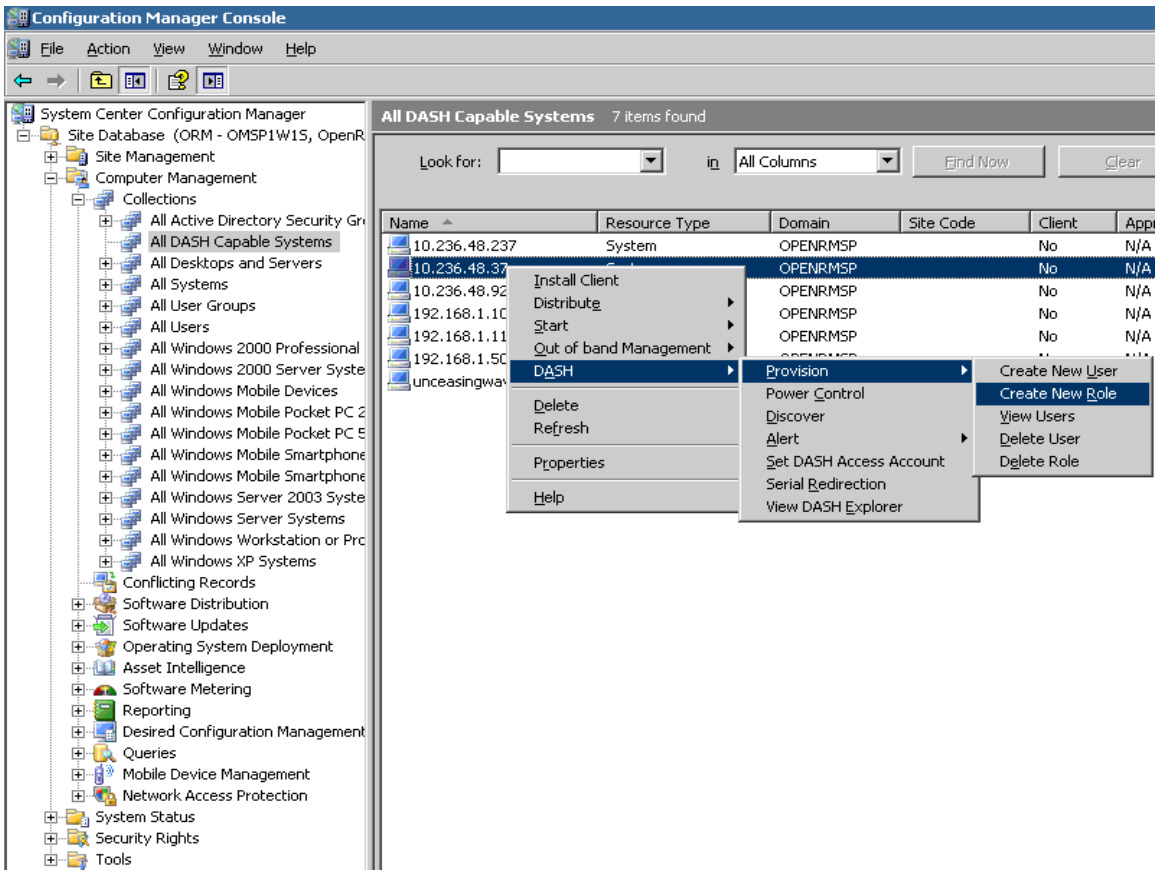

Figure 32. Provisioning Create New Role Context Menu.

5. The "Create Role" dialog box appears as shown in Figure 33 below.

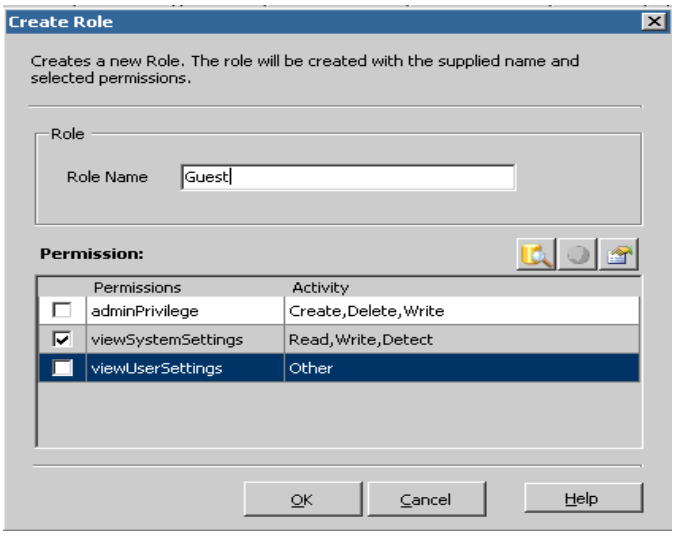

Figure 33. Create New Role Dialog Box

6. Click the "Query" button and it will display the available permission and activity.

7. Enter the Role Name and Select the Permissions which you like to add to that role and select the activity from the "Add Activity" Dialog as shown in figure 34 Below.

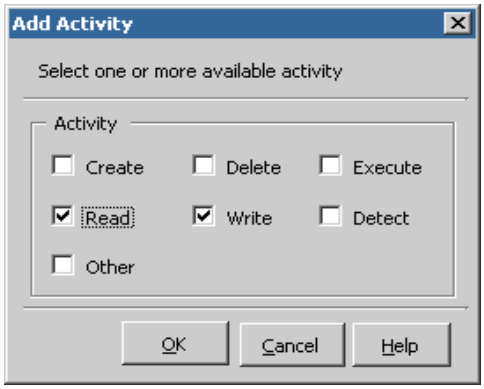

Figure 34. Add Activity Dialog Box

8. By clicking the "Modify" icon you can add or remove the activity to the desired role.

6.2.3 View User

This feature lists all the available user in the system.

Follow the steps outlined in the following section to create a new account.

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management-->Collections.

2. Select the collection that contains the desired DASH system.

3. Select the DASH capable system and right click to display the context menu.

4. Select DASH-->Provision -->View User menu item as shown in Figure 35 below.

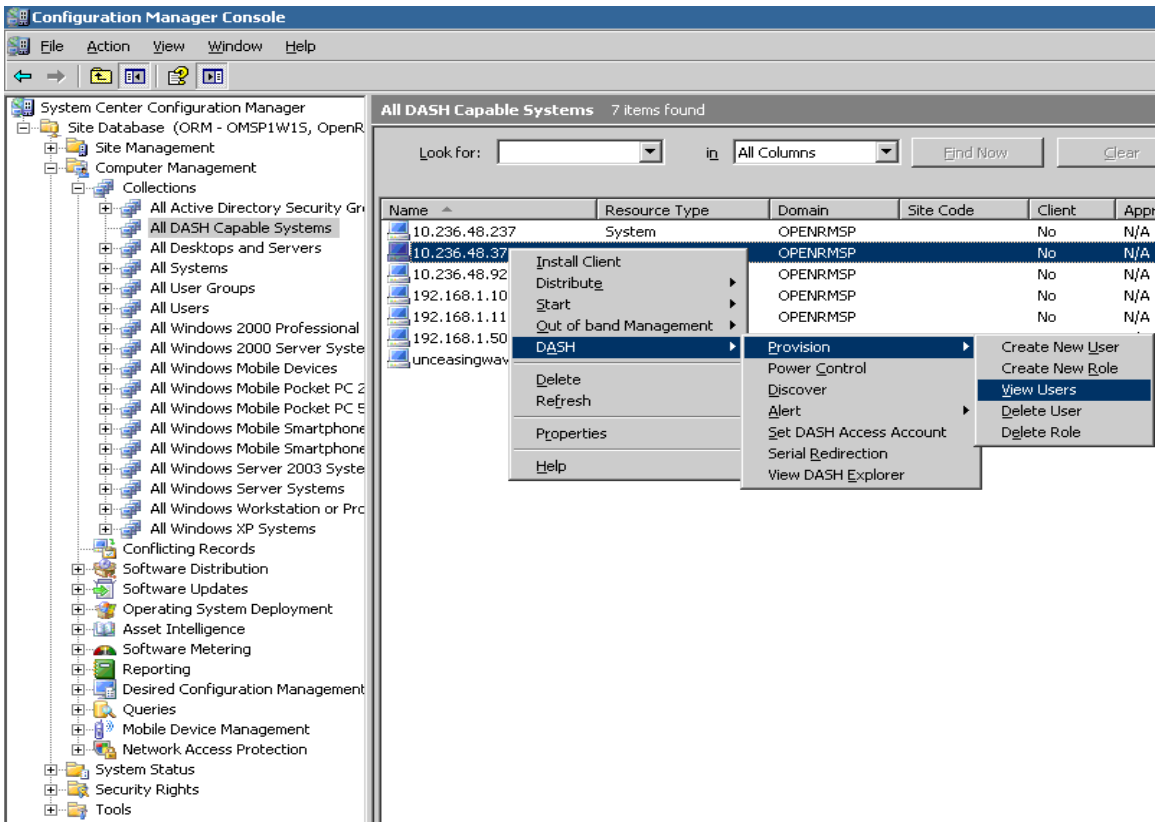

Figure 35. Provisioning View User Context Menu.

5. The "View User" dialog box appears as shown in Figure 36 below.

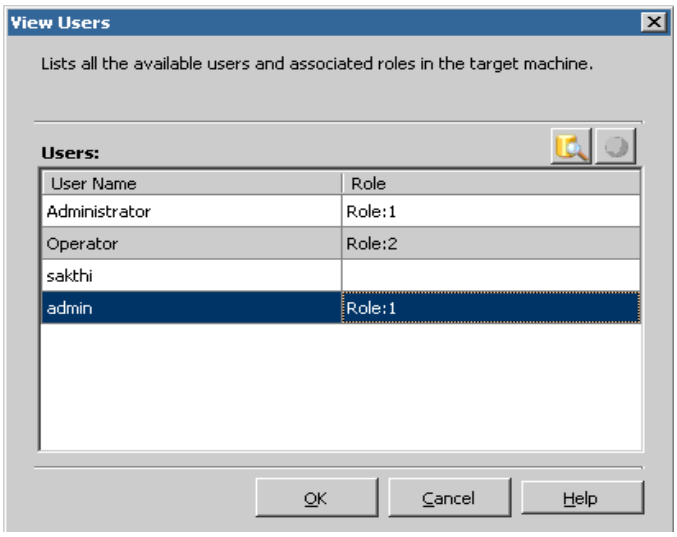

Figure 36. View User Dialog Box.

6. Click the "Query" Button and it will displays the Username and their Role.

6.2.4 Delete User

This feature lets you to delete an existing DASH user account.

Follow the steps outlined in the following section to create a new account.

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management-->Collections.
2. Select the collection that contains the desired DASH system.
3. Select the DASH capable system and right click to display the context menu.
4. Select DASH-->Provision -->Delete User menu item as shown in Figure 37 below.

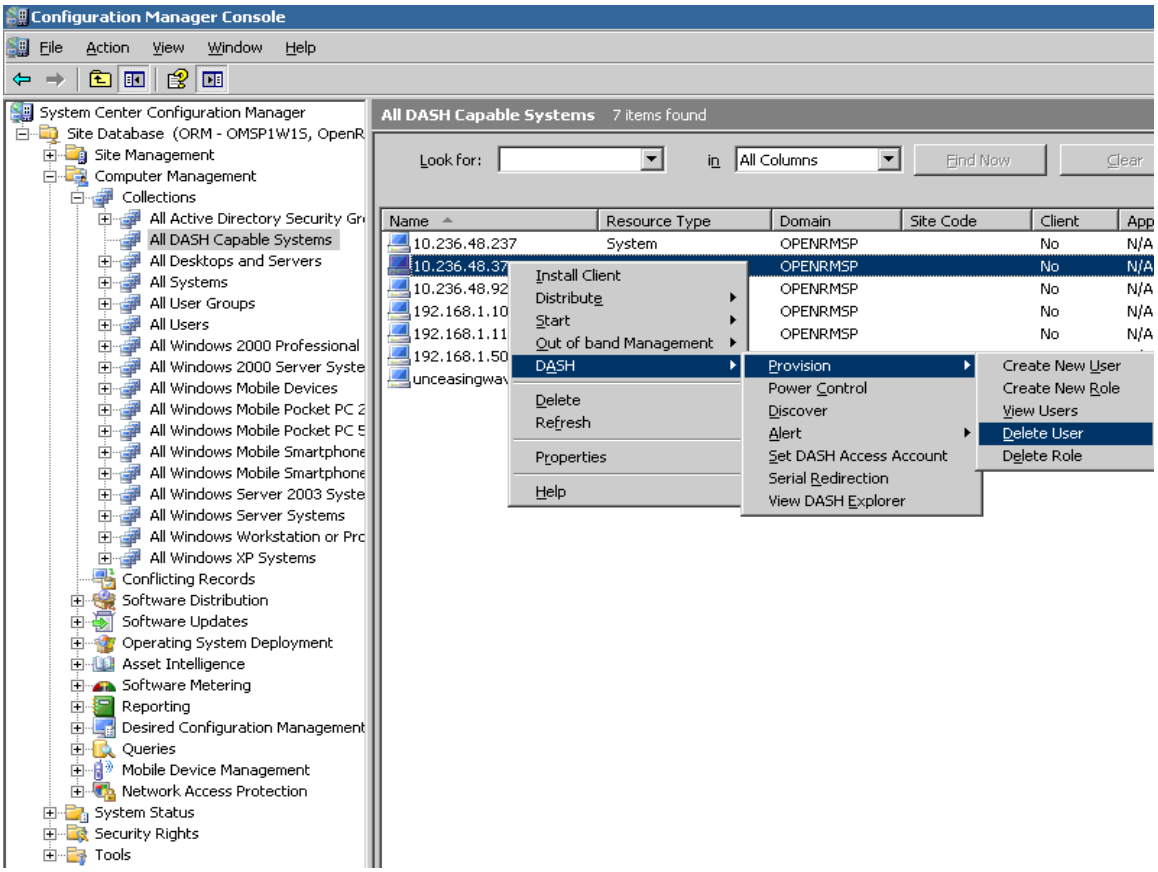

Figure 37. Delete User Dialog Box.

5. The "Delete User" dialog box appears as shown in Figure 38 below.

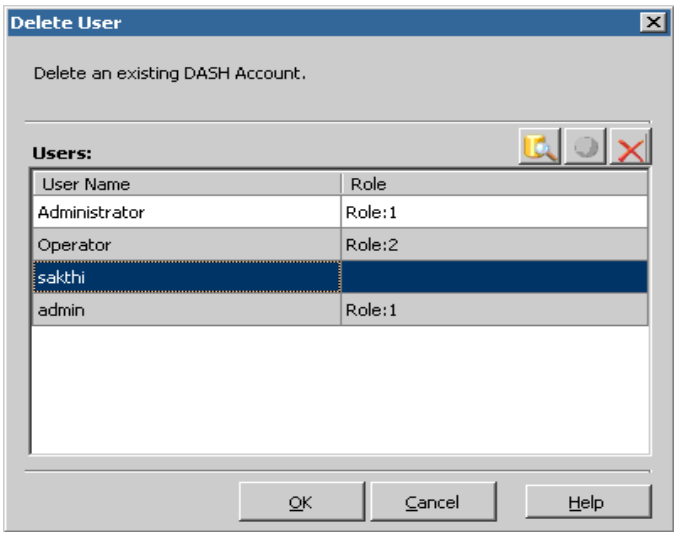

Figure 38. Delete User Dialog Box.

6. Click the "Query" button and it will lists the users available in the system
7. Select the User Name to Delete and Click Ok.

6.2.5 Delete Role

This feature lets you to delete an existing role for a selected user .

Follow the steps outlined in the following section to create a new account.

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management-->Collections.
2. Select the collection that contains the desired DASH system.
3. Select the DASH capable system and right click to display the context menu.
4. Select DASH-->Provision -->Delete Role menu item as shown in Figure 39 below.

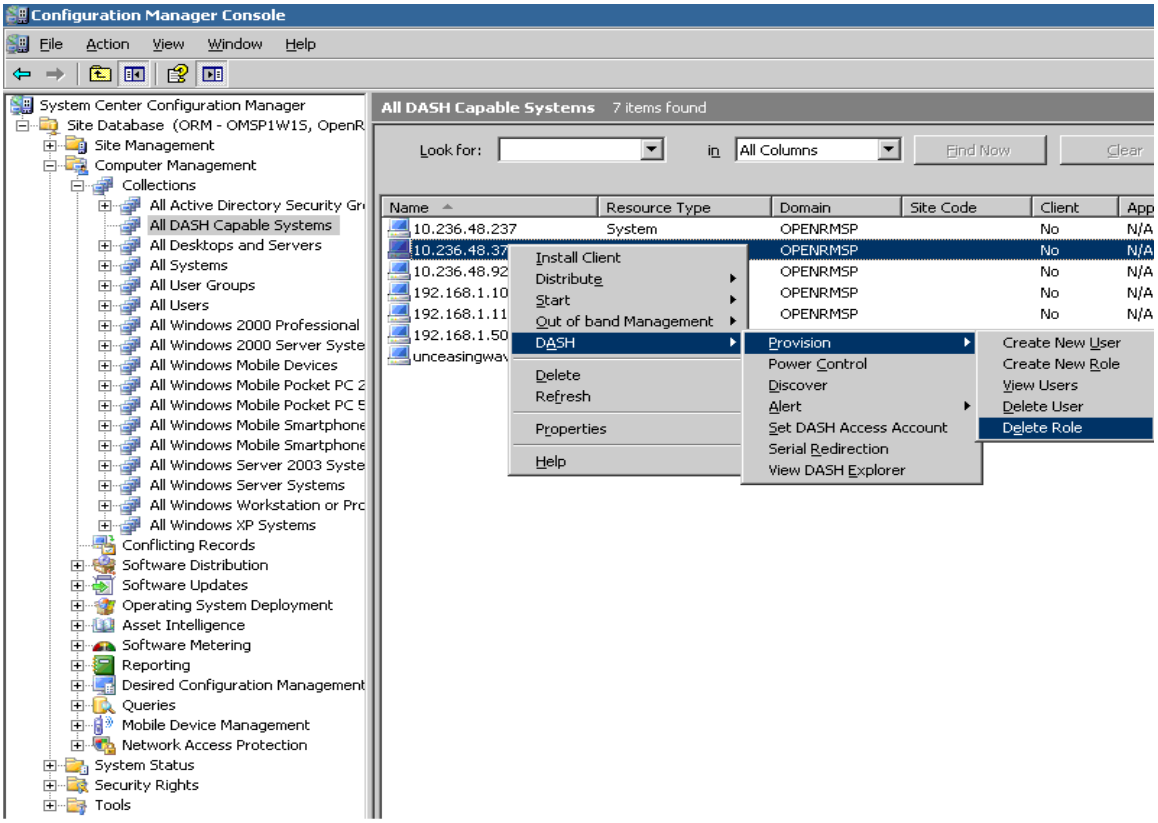

Figure 39. Delete Role Context Menu.

5. The "Delete Role" dialog box appears as shown in Figure 40 below.

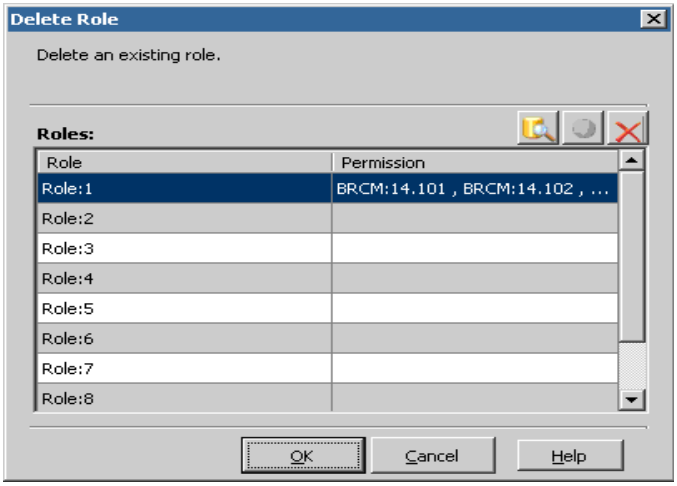

Figure 40. Delete Role Dialog Box

6. Click the Query button and it will display the list of Roles available in the system.

7. Select the Role to Delete and Click Ok.

Chapter 7 Power control

This feature allows you to control the power state of a DASH capable remote system or group of systems, including power up, power down, reset, and power cycle. Also, it allows you to select a boot device before a remote power cycle.

7.1 Powering On or Off a Collection

The SCCM DASH plug-in allows you to control power state and boot device order for a group of systems in a given collection.

Follow the steps outlined below to control power state and boot device order for a collection.

1. Traverse to System Center Configuration Manager -->Site Database-->Computer Management-->Collections.

2. Right click on the selected collection.

3. Select DASH -->Power Control as shown in Figure 41 below.

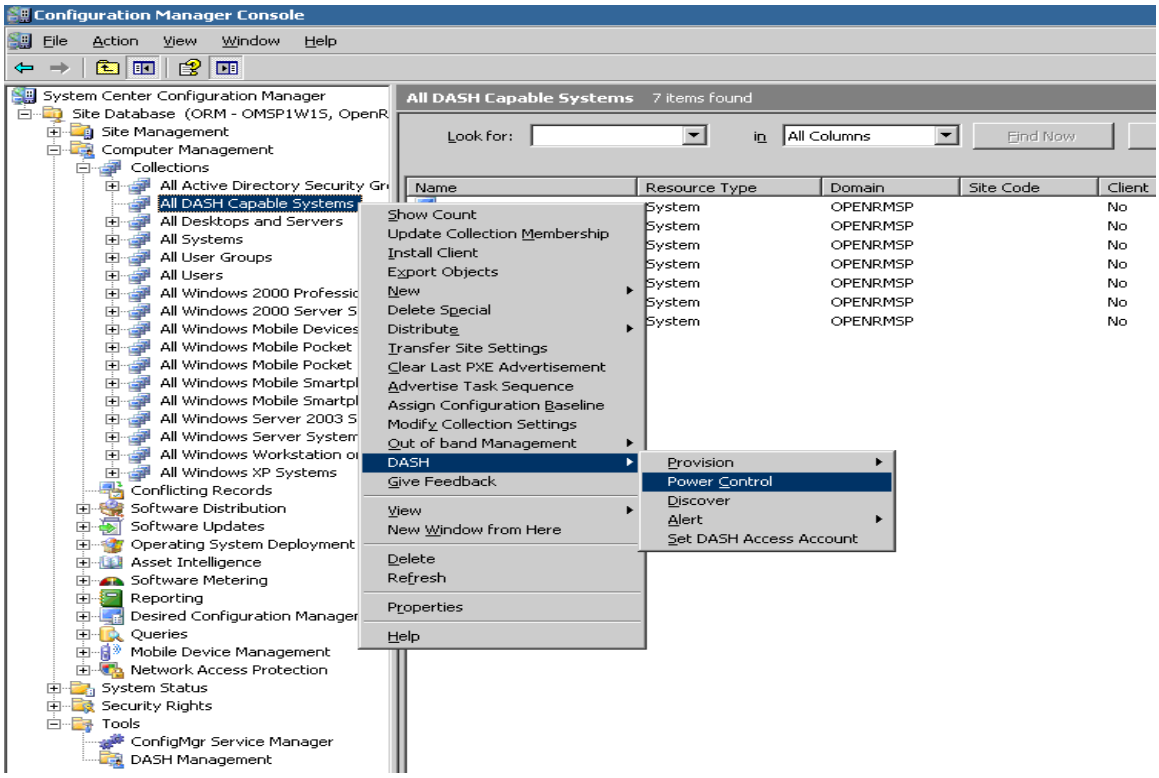

Figure 41. Power Control Context Menu for Collection

4. The "Power Control Collection" dialog box appears as shown in Figure 42 below.

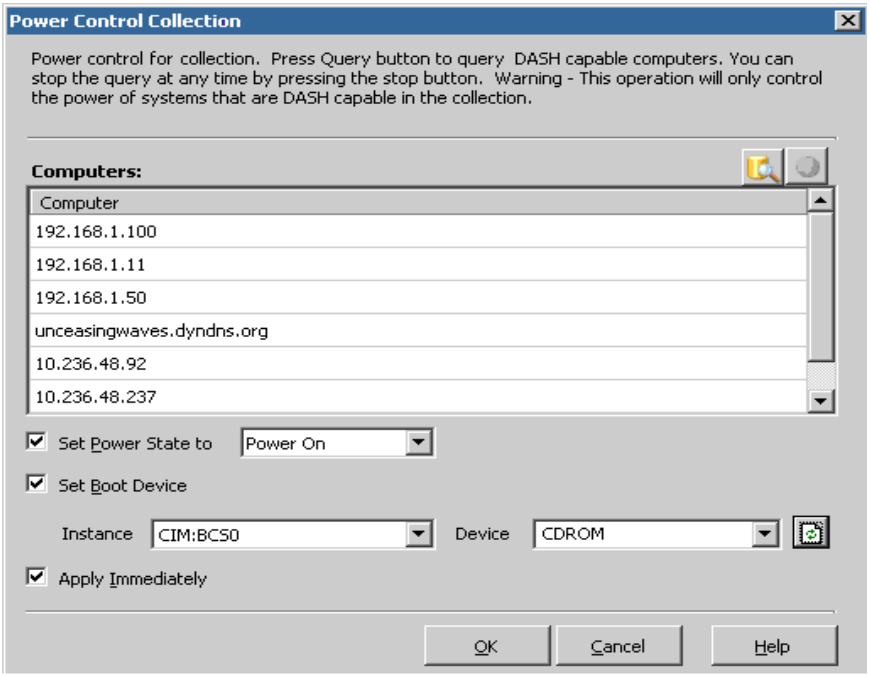

Figure 42. Power Control Dialog Box for a Collection

5. Click the Query button and it will display the power state of all DASH capable systems.
6. Change the power state and boot device to the desired order
7. Click the "OK" button to apply the changes

7.1.1 Start Execute Query Button

Click the Start Execute Query button to start the power control query process and to retrieve the current "Power State" and "Boot Device" for DASH capable systems

7.1.2 Stop Execute Query Button

You can use this button to stop the power control querying process.

7.1.3 Available Power State Options

You can select from the following available options:

1. Power On
2. Power Off
3. Power Reset

4. Power Cycle

Power cycling - Usually a computer turns Off and then On again. Reasons for power cycling include having an electronic device reinitialize its configuration or recover from an unresponsive state of its mission critical functionality, such as a crash or hang situation.

Power Reset - In a computer or data transmission system, to reset means is to clear any pending errors or events and bring a system to normal condition or initial state usually in a controlled manner.

7.2 Powering On or Off a Client

The SCCM DASH Plug-in allows control of power state and setting boot device of a individual DASH client.

Follow the steps outlined below to control the system's power state.

1. Traverse to System Center Configuration Manager -->Site Database -->Computer Management-->Collections.
2. Click on the collection containing the desired DASH client to be controlled.
3. Select and Right click on the DASH client to be controlled.
4. Select DASH-->Power Control as shown in Figure 43 below.

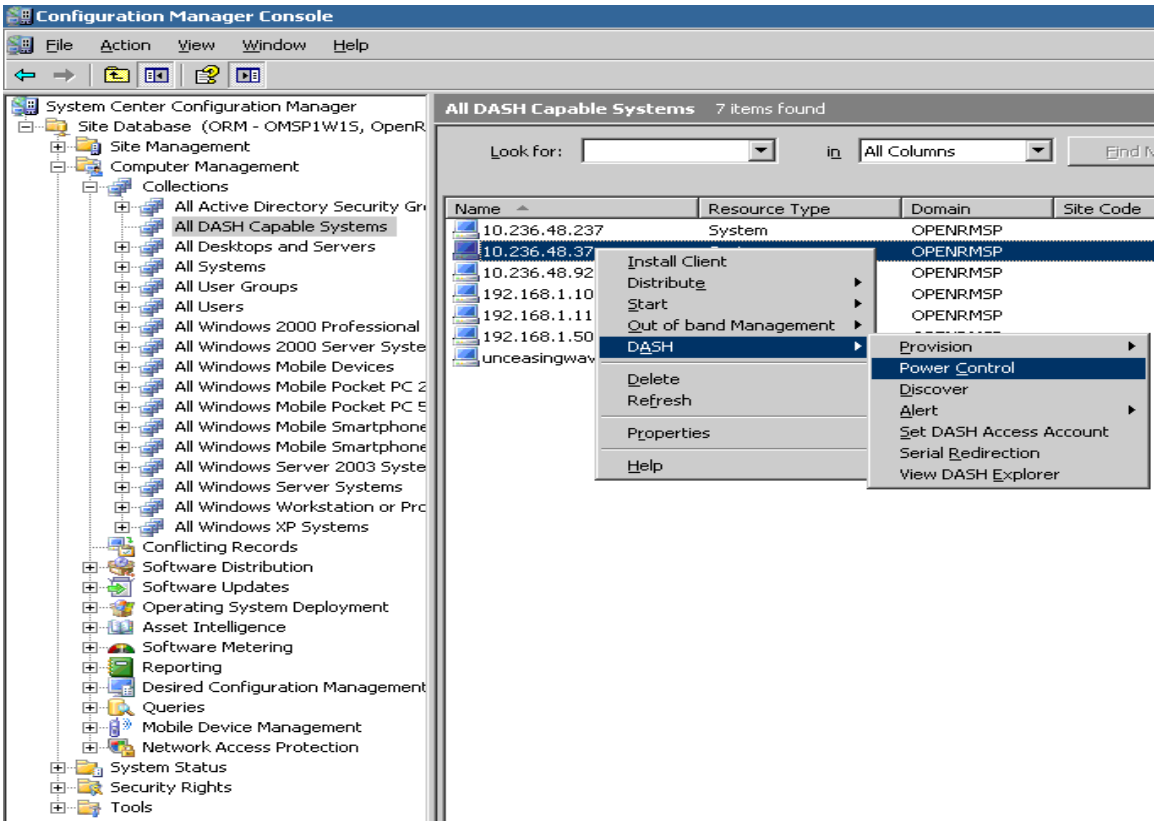

Figure 43. Power Control Context Menu for Client

5. The "Power Control Client" dialog box appears as shown in Figure 44 below .

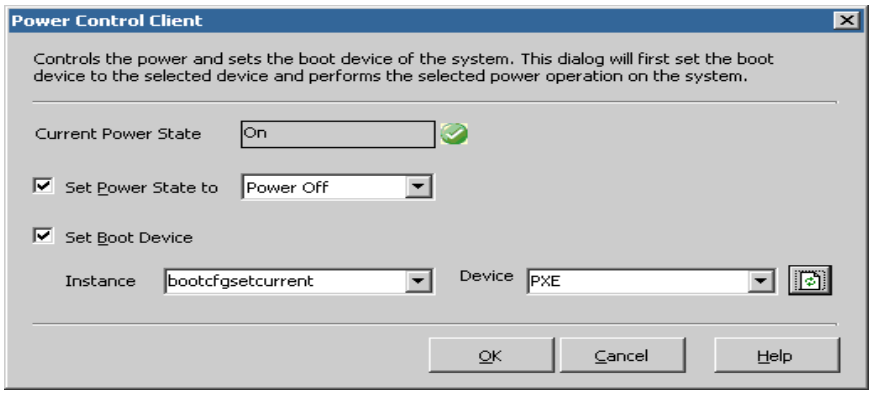

Figure 44. Power Control Dialog Box for Client

6. Click the Refresh button to get the instance ID and boot device. Then Configure the power state and boot device.

7. Click the "OK" button to apply the new configuration.

Chapter 8 Alert

This feature provides the capability to subscribe to events, such as CPU temperature, boot failure, etc...It allows you to subscribe and unsubscribe to DASH events for a single system, multiple systems or entire collection of systems.

The plug-in service acts as the subscribing agent for the selected DASH client and the client received events are exposed as status messages. The Figure 45 shows the status message queries node.

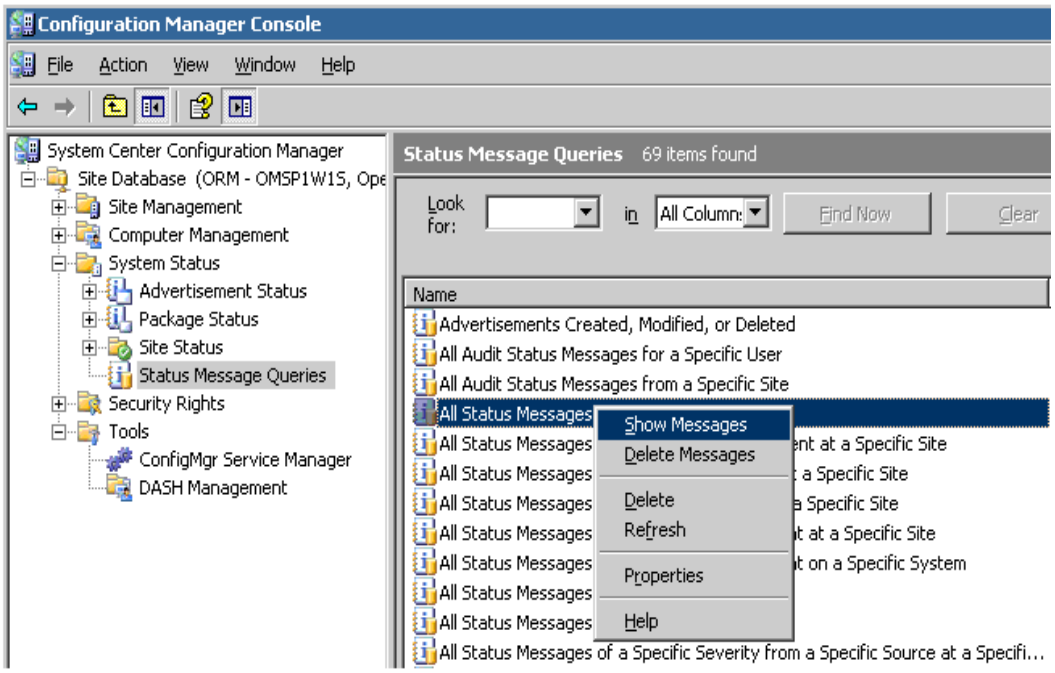

Figure 45. Status Message Queries Node

Supported alerts are:

1. CPU Temperature
2. System Temperature
3. CPU Fan
4. System Fan
5. Chassis Intrusion
6. BIOS boot failure

8.1 Alert Subscription for a Collection

Follow the steps outlined below to subscribe to DASH alerts.

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management -->Collections.

2. Right click on any collection for which you wish to subscribe for DASH alerts

3. Select DASH --> Alert--> subscribe context menu as shown in Figure 46 below.

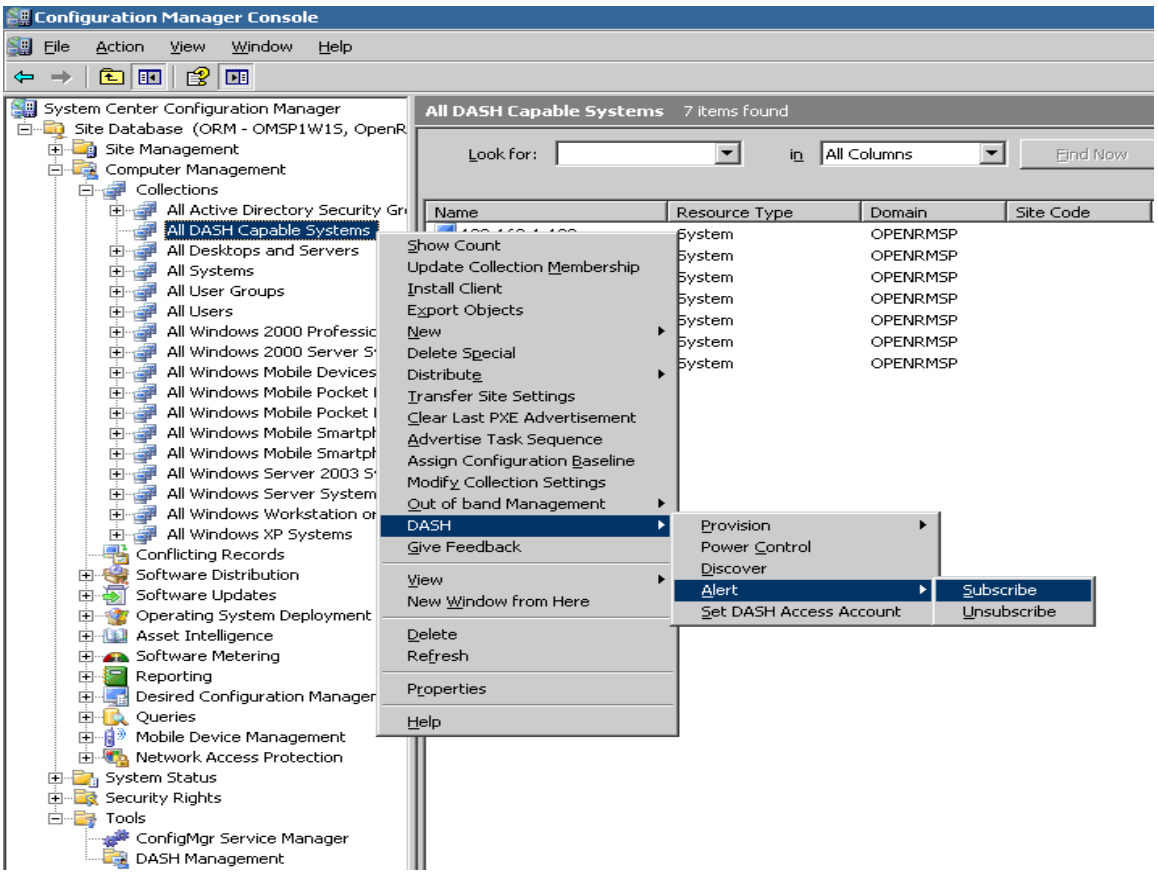

Figure 46. Alert Subscription Context Menu for Collection

4. The "Alert Subscription Collection" dialog box appears as shown in Figure 47 below.

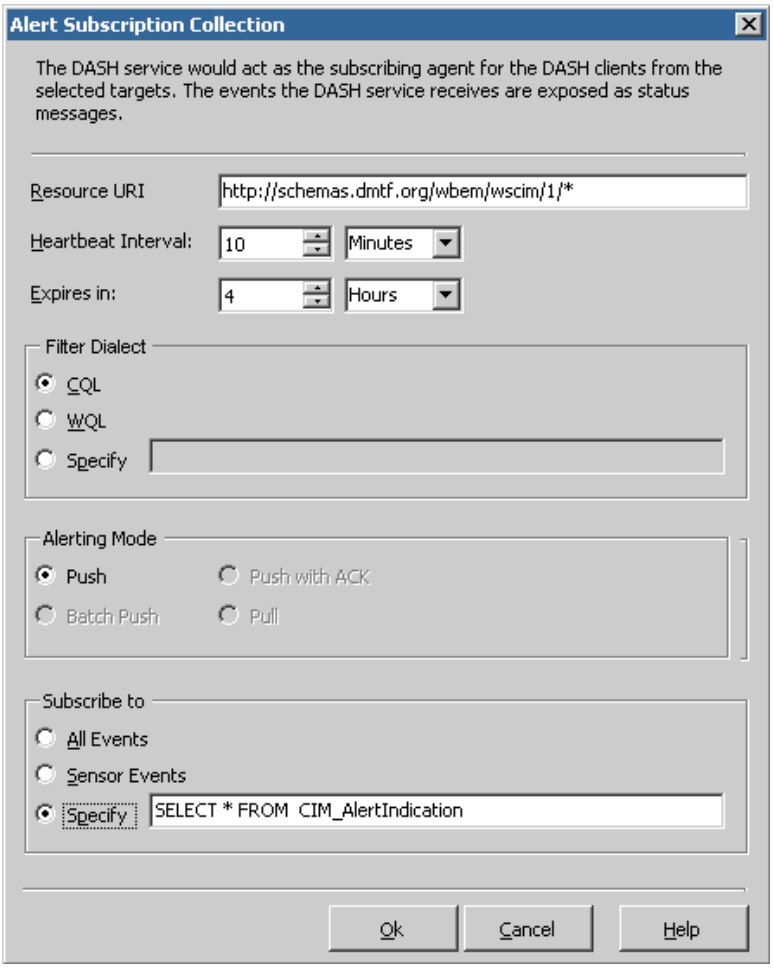

Figure 47. Alert Subscription Dialog Box for Collection

5. Configure the alert properties. Refer Table 3 to configure the alert properties.

Field/Option	Description
Resource URI	The WS-MAN resource that processes the subscription. Ex:http://schemas.dmtf./wbem/wscim/1/*
Heartbeat Interval	Interval to send a heartbeat event. If there is no event for a subscription in the specified interval, an heartbeat event will be sent to the console.
Expires in	Expiration timeout specifies maximum length of time that client sends the events to console.
CQL	Plug-in will use CQL as filter dialect
WQL	Plug-in will use WQL as filter dialect
Specify(Filter Dialect)	Plug-in will use the specified text as filter dialect.

Push	In push mode notifications are pushed to the client. An advantage of the push model is that notifications are routed to the client as soon as they are available.
Push with ACK	The push with acknowledgment mode requires acknowledgment from client.
Batch Push	The batch push mode allows an event client to batch multiple notifications into a single message. This is an effective way of reducing the number of notifications from a high volume notification client without sacrificing too much on timeliness.
Pull	In pull mode, the console is responsible for polling the client at regular intervals and pulling notifications if any are available. Though the console may not receive notifications instantly, one advantage of the pull mode is that the console is always in control of the rate at which it process notifications.
All Event	Subscribe to all events.
Sensor Events	Subscribe to sensor events only.
Specify(Subscribe to)	Subscribe to a subset of events on the MAP.

Table 3. Configure Alert Properties Fields

6. Click "OK" button to subscribe to DASH alerts**.**

8.2 Alert Unsubscription for a Collection

Follow the steps outlined below to subscribe to DASH alerts.

1) Traverse to System Center Configuration Manager -->Site Database --> Computer Management -->Collections.

2) Right click on any collection for which you wish to unsubscribe for DASH alerts

3) Select DASH --> Alert-->Unsubscribe context menu as shown in Figure 48 below.

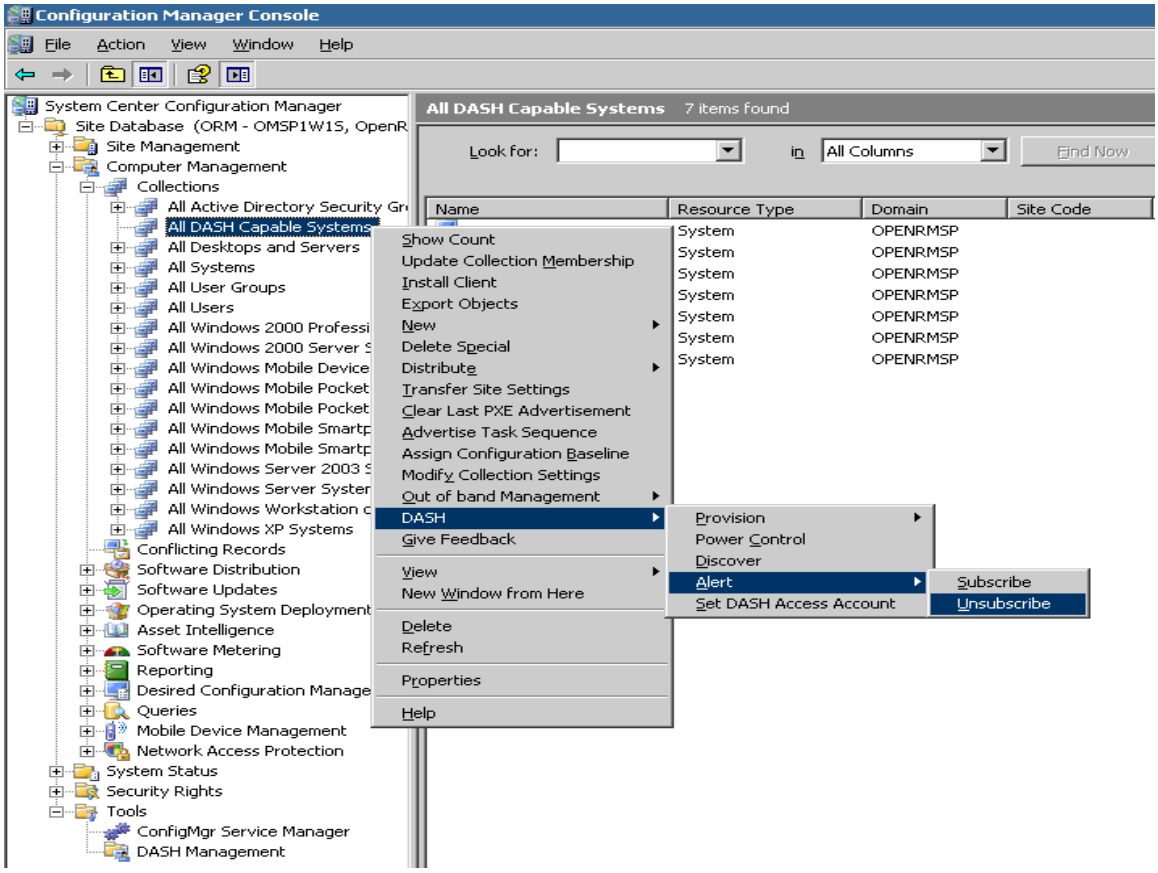

Figure 48. Alert Unsubscription Context Menu for Collection

4) The "Alert Unsubscription Collection" dialog box appears as shown in Figure 49 below.

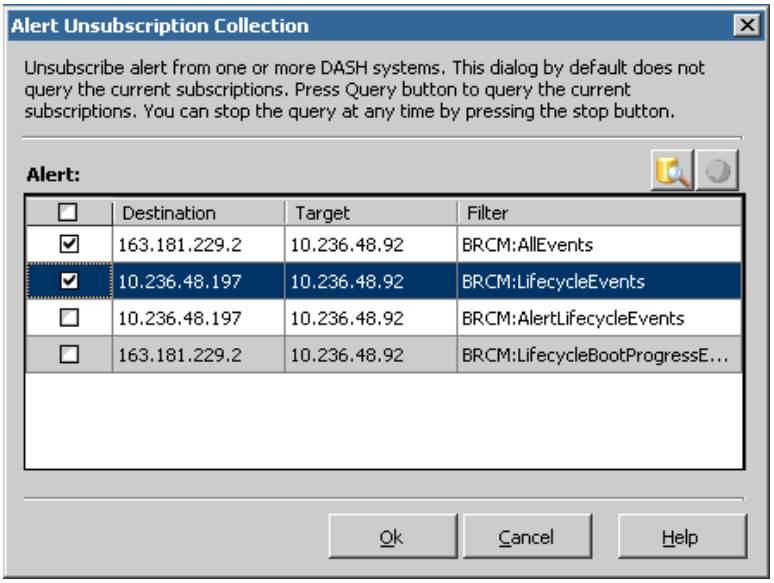
Alert Unsubscription Collection
Unsubscribe alert from one or more DASH systems. This dialog by default does not query the current subscriptions. Press Query button to query the current subscriptions. You can stop the query at any time by pressing the stop button.
Alert:
Destination
Target
Filter
163.181.229.2 10.236.48.92 BRCM:AllEvents
10.236.48.197 10.236.48.92 BRCM:LifecycleEvents
10.236.48.197 10.236.48.92 BRCM:AlertLifecycleEvents
163.181.229.2 10.236.48.92 BRCM:LifecycleBootProgressE...
Ok
Cancel
Help

Figure 49. Alert Unsubscription Dialog Box for Collection

5 .Click the "Query" button and it will display all the available subscriptions from DASH capable systems you have subscribed.

6. Select subscription(s) from the list which you want to unsubscribe.

7. Click "OK" button .

8.3 Alert Subscription for a Client

SCCM DASH plug-in supports the following three types of subscription,

1. Dynamic Filter:
   Users can subscribe to events by creating filters dynamically using resource URI, Query Language and Filter Query.

2. Static Filter:
   Users can subscribe using the available filters in the target.

3. Filter collection.
   Users can subscribe using available group of filters in the target.

Follow the steps outlined below to subscribe to DASH alerts from an individual DASH capable system.

1. Traverse to System Center Configuration Manager -->Site Database -->Computer Management -->Collections.

2. Select any collection that contains the required DASH client.

3. Right click on the desired DASH client to display the DASH context menu.

4. Select DASH -->Alert-->Subscribe as shown in Figure 50 below.

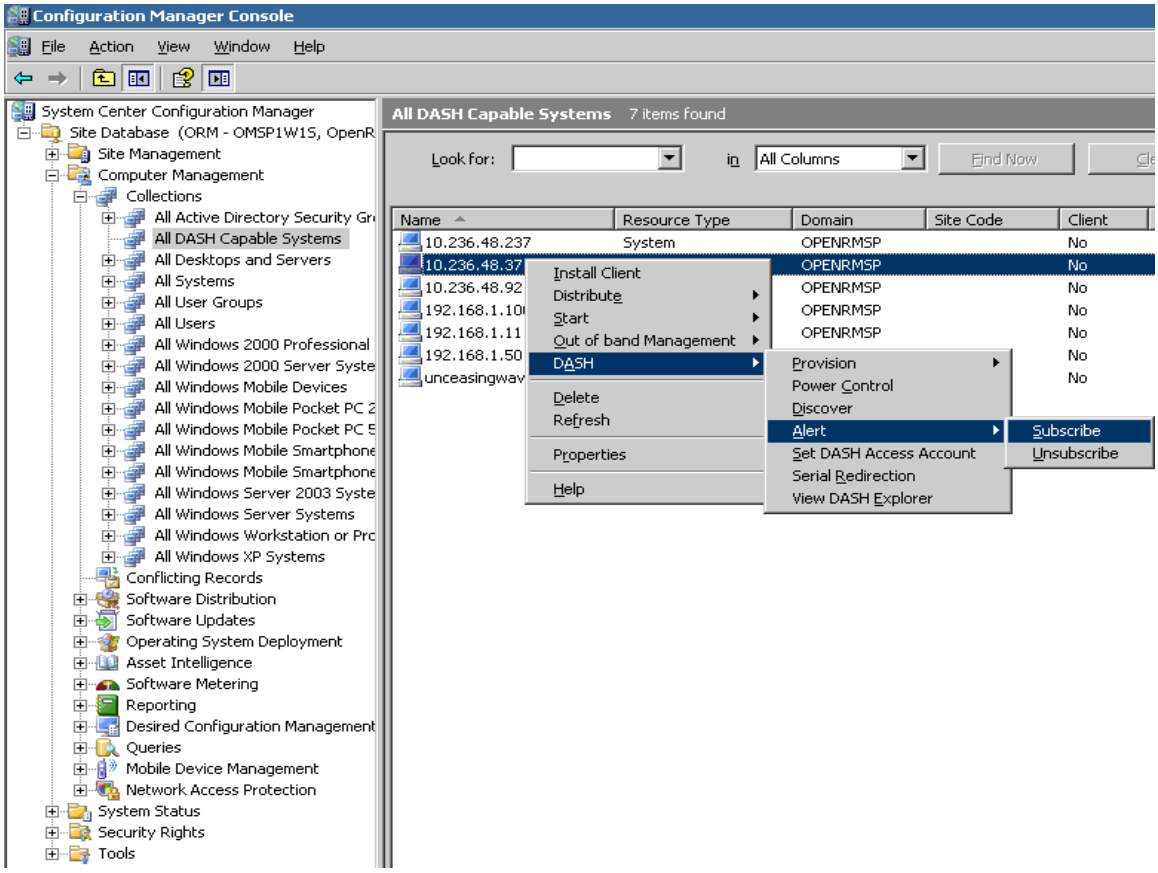

Figure 50. Alert Subscription Context Menu for Client

5. The "Alert Subscription Client" dialog box appears as shown in Figure 51 below.

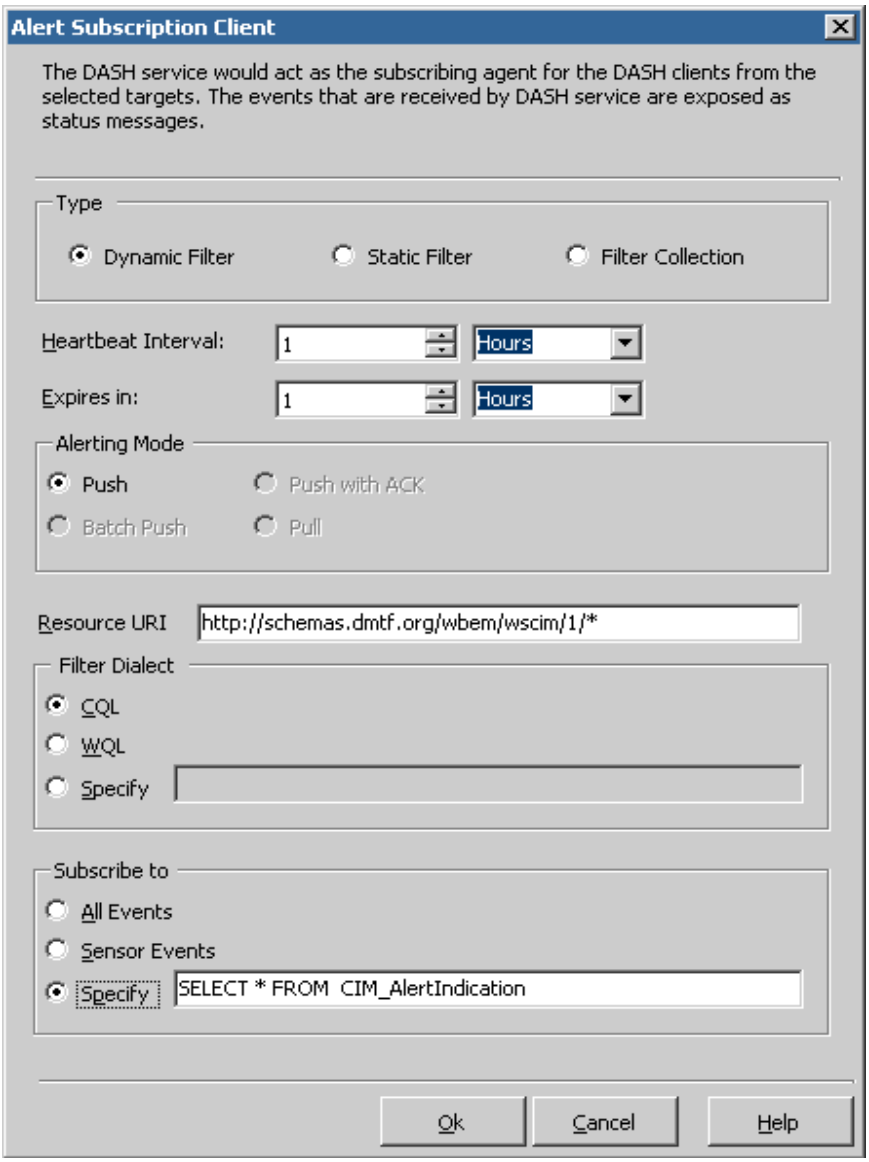

Figure 51. Alert Subscription Dialog Box for Client Using Dynamic Filter

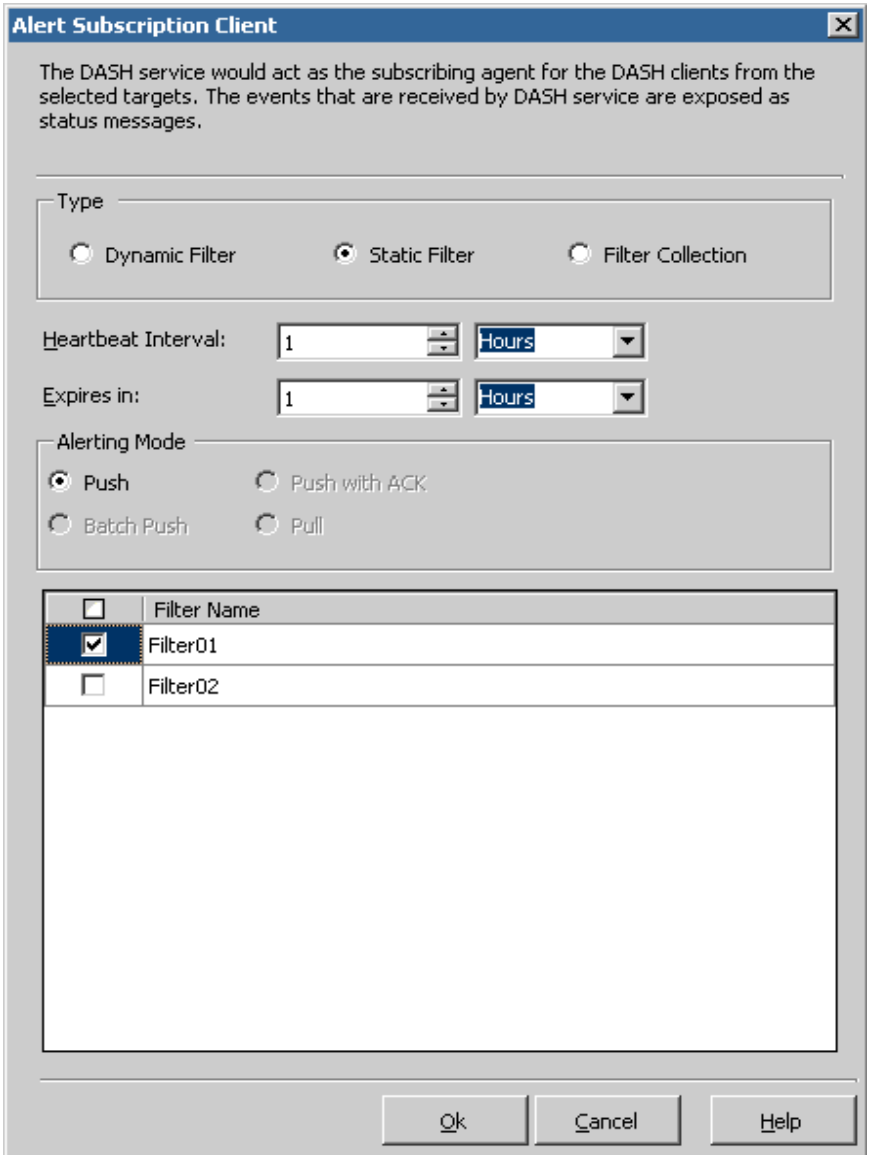

Figure 52. Alert Subscription Dialog Box for Client Using Static Filter

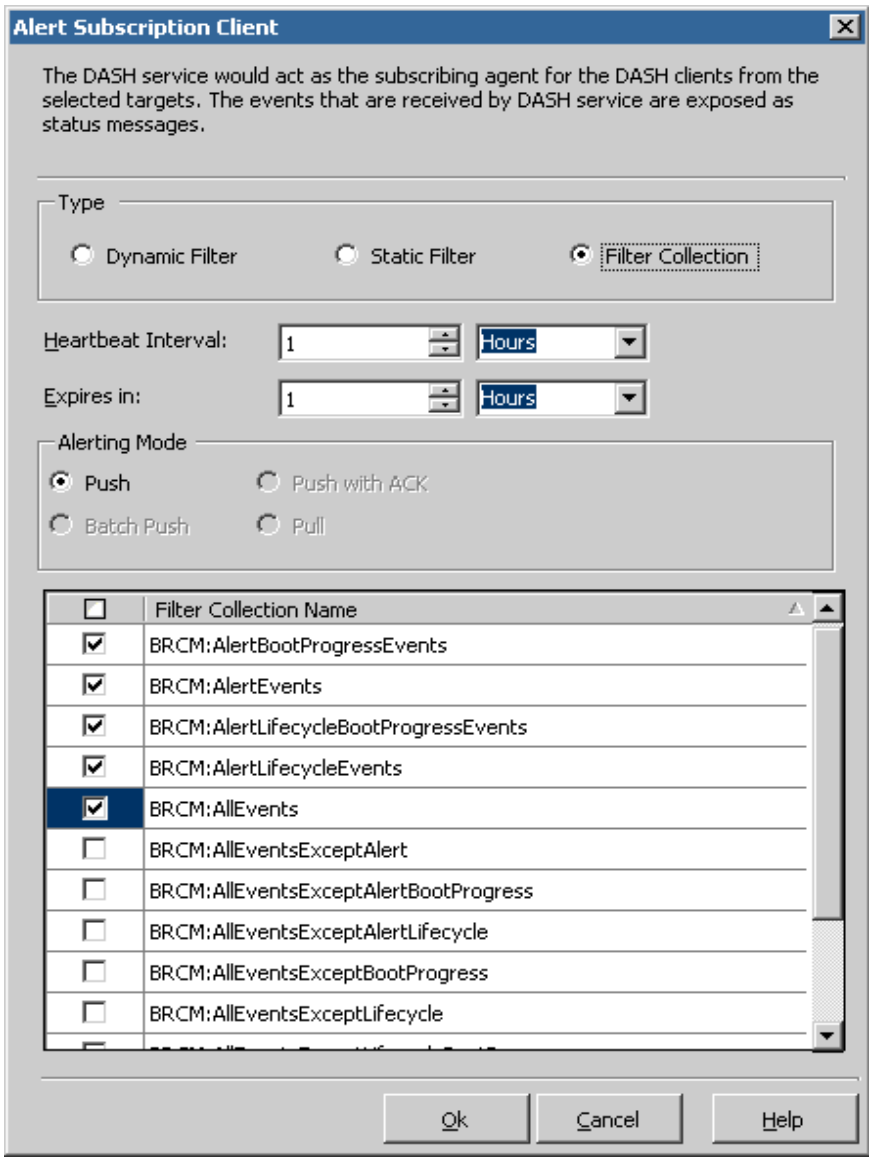

Figure 53. Alert Subscription Dialog Box for Client Using Filter Collection

6. Configure alert properties. Refer Table 3 in the previous section for more information.
7. Click "OK" button to subscribe to alerts.

8.4 Alert Unsubscription for a Client

Follow the steps outlined below to subscribe to DASH alerts from an individual DASH capable system.

1) Traverse to System Center Configuration Manager -->Site Database -->Computer Management -->Collections.

2) Select any collection that contains the required DASH client.

3) Right click on the desired DASH client to display the DASH context menu.

4) Select DASH -->Alert-->Unsubscribe as shown in Figure 54 below.

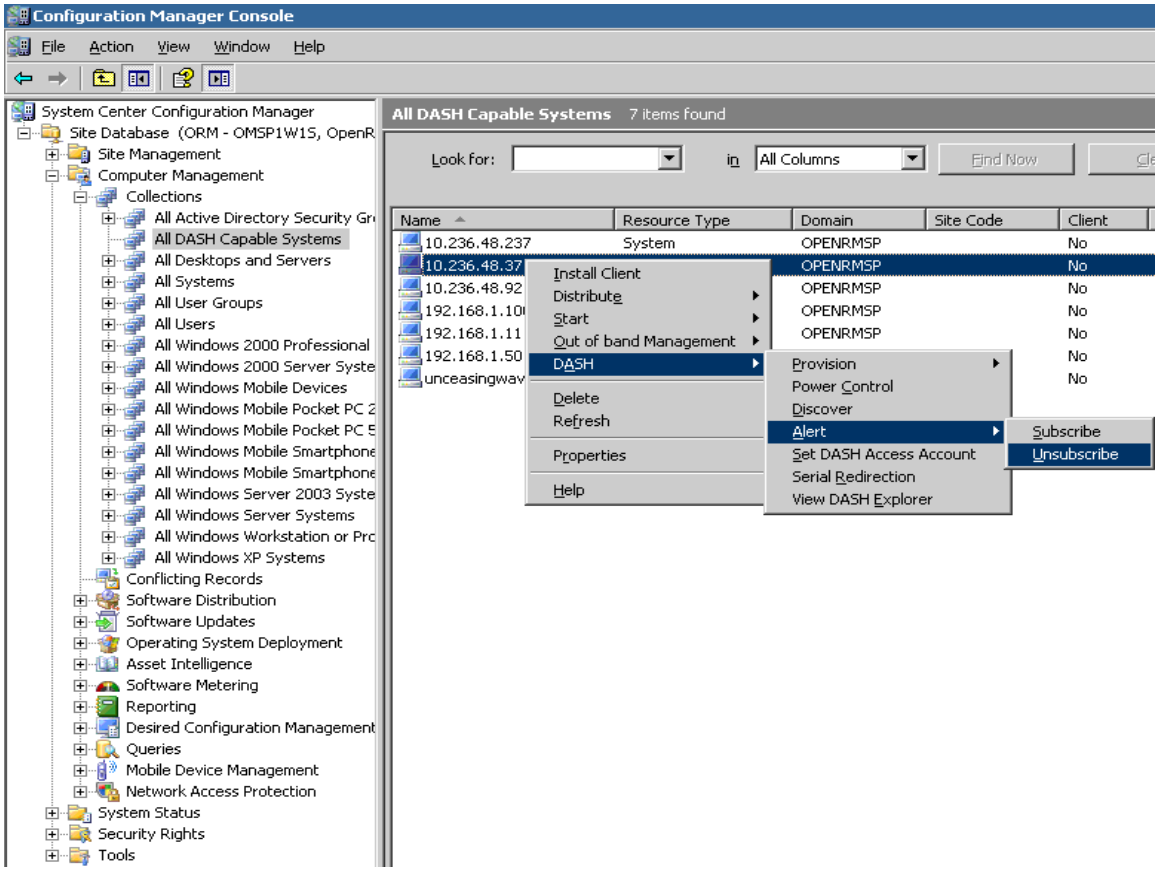

Figure 54. Alert Unsubscription Context Menu for Client

5) The "Alert Unsubscription System" dialog box appears as shown in Figure 55 below.

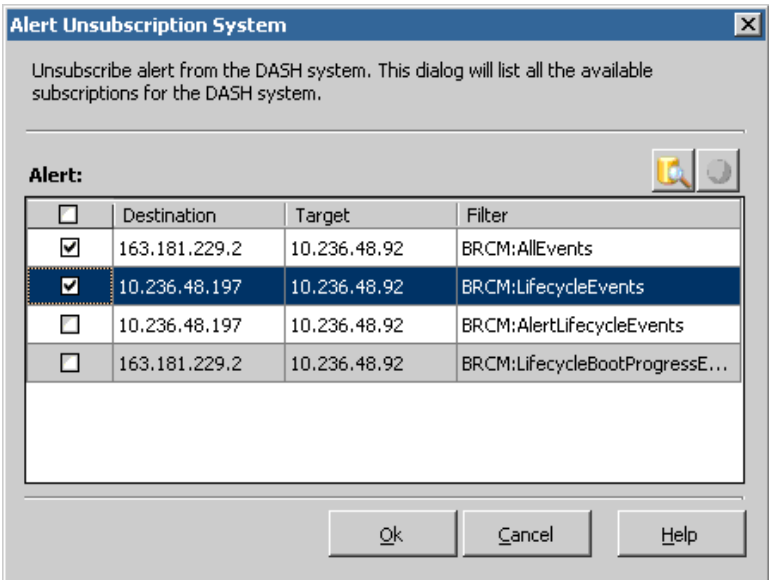

Figure 55. Alert Unsubscription Dialog Box for Client

6. Click the Query button and to display all subscribed alerts and Select a subscription(s) from the list which you want to unsubscribe.
7. Click "OK" button .

Chapter 9 Serial Redirection

Follow the steps outline below for Serial redirection

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management-->Collections.
2. Select the collection which contains the desired DASH client
3. Select the DASH capable system and right click to display the context menu.
4. Select DASH --> Serial Redirection context menu as shown in Figure 56 below.

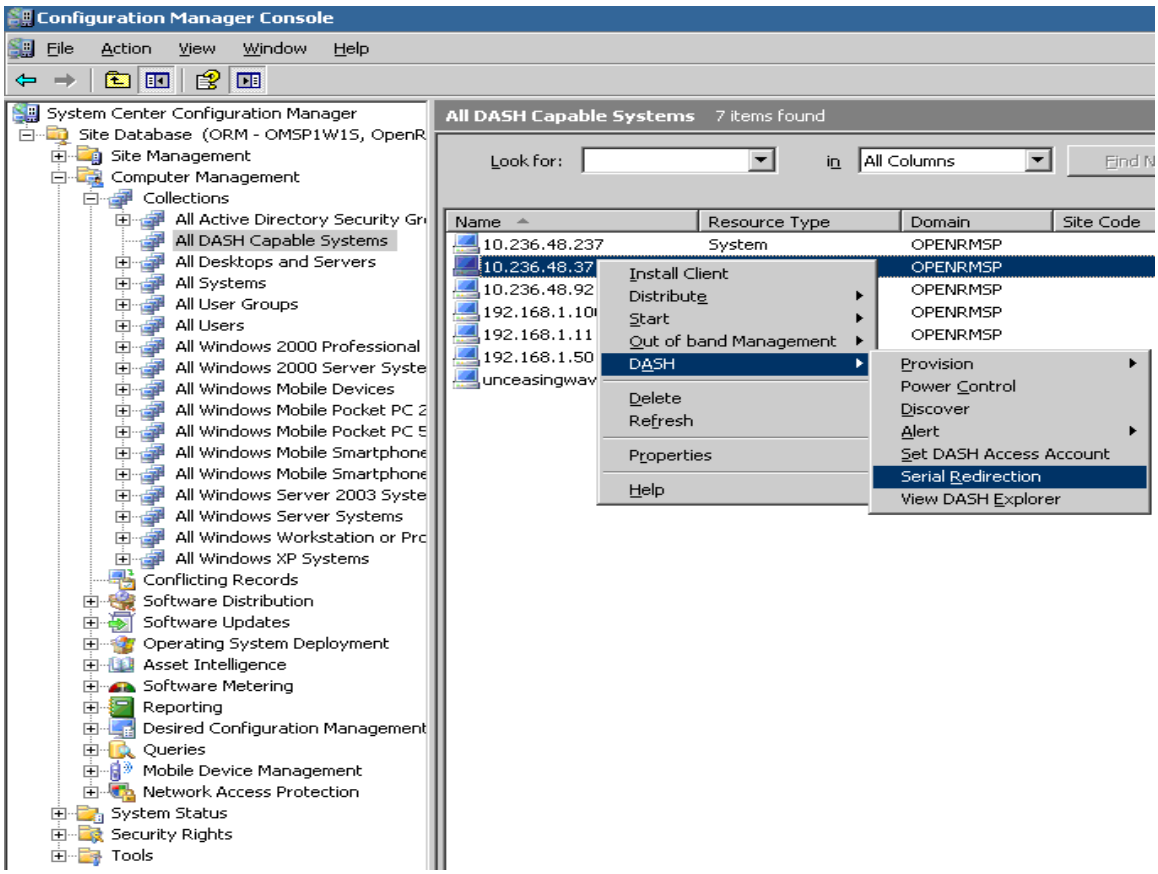

Figure 56. Serial Redirection Context Menu.

5. The "Serial Redirection" dialog box appears as shown in Figure 57 below.

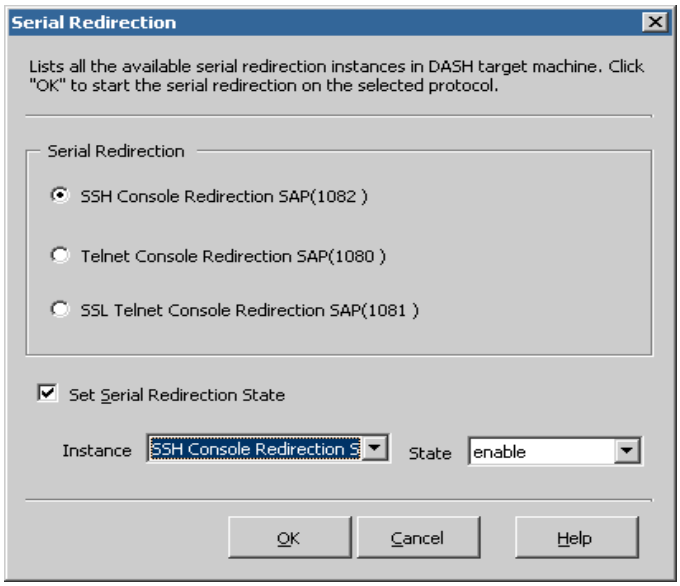
Serial Redirection
Lists all the available serial redirection instances in DASH target machine. Click "OK" to start the serial redirection on the selected protocol.
Serial Redirection
SSH Console Redirection SAP(1082)
Telnet Console Redirection SAP(1080)
SSL Telnet Console Redirection SAP(1081)
Set Serial Redirection State
Instance
SSH Console Redirection S
State
enable
OK
Cancel
Help

Figure 57. Serial Redirection Dialog Box.

6. Select the Serial Redirection Protocol type and Click "OK" to start the serial redirection and you can also set serial redirection state .

Chapter 10 DASH Explorer

The DASH Explorer feature allows you to view collected inventory information such as computers, processors, memory, software and physical assets of the DASH capable systems.

10.1 DASH Explorer for Client

Follow the steps outlined below to view DASH Hardware and Software Inventory.

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management -->Collections.
2. Select the collection which contains the desired DASH client.
3. Select the DASH client and right click to display the context menu.
4. Select DASH--> View DASH Explorer menu item as shown in Figure 58 below.

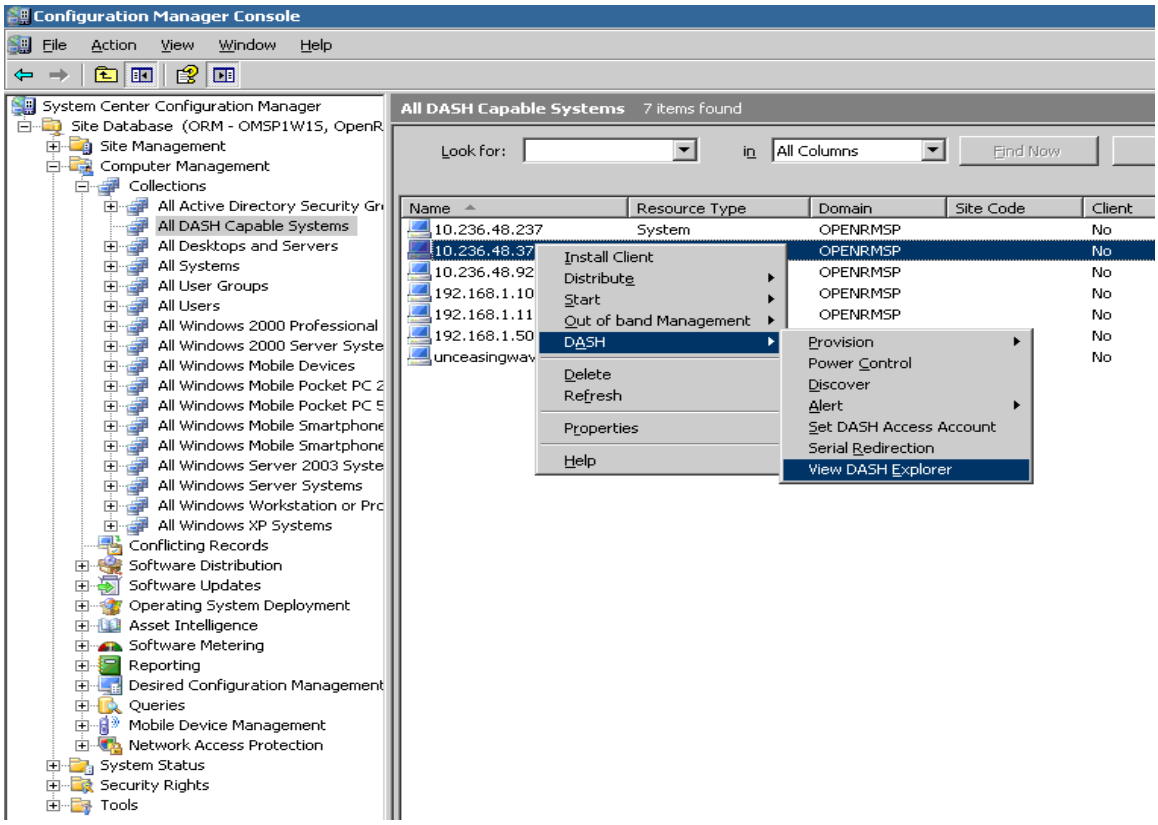

Figure 58. View DASH Explorer Context Menu for Client

5. The "DASH Explorer" view box appears as shown in Figure 59 below.

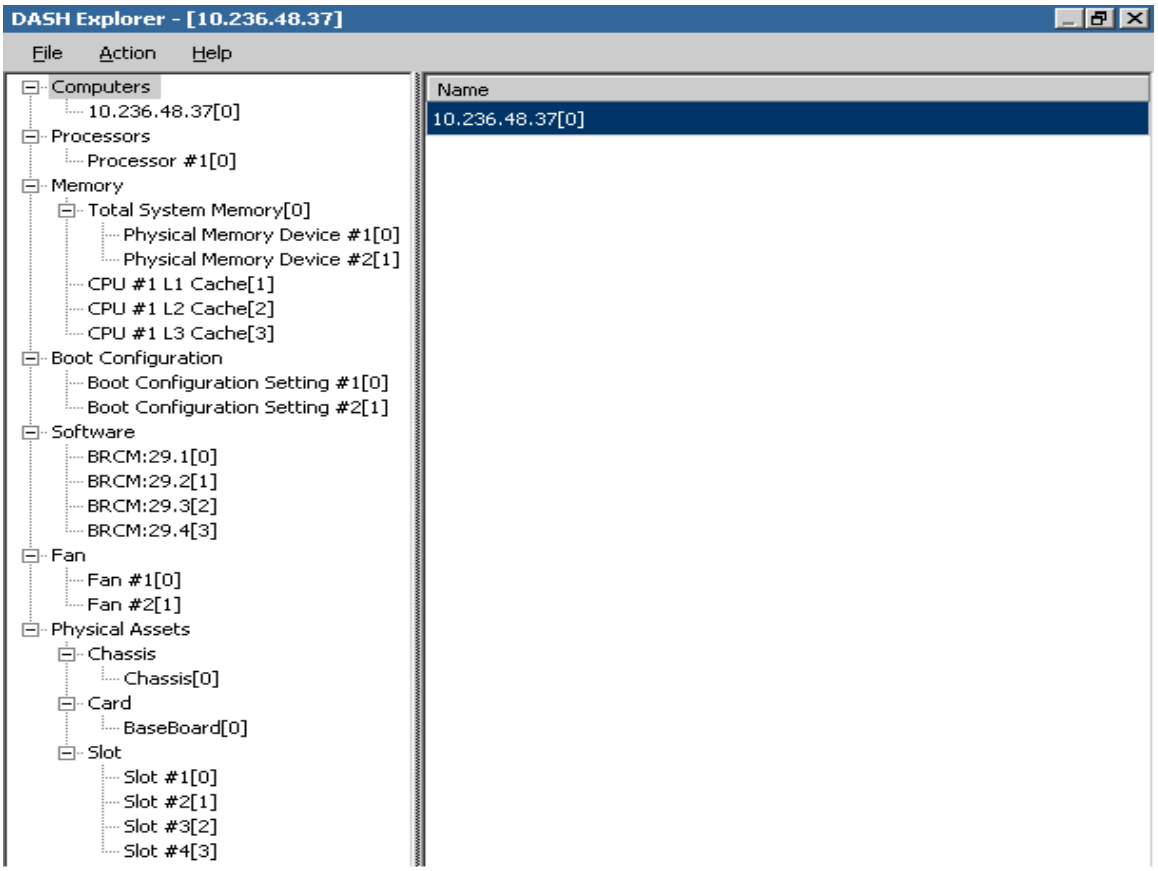

Figure 59. DASH Explorer

6. The DASH Explorer Menu is shown in Figure 59 below
   Refresh - This option lets you reload the inventory information from the database.
   Sync Inventory - This option lets you to initiate inventory information collection for the system.

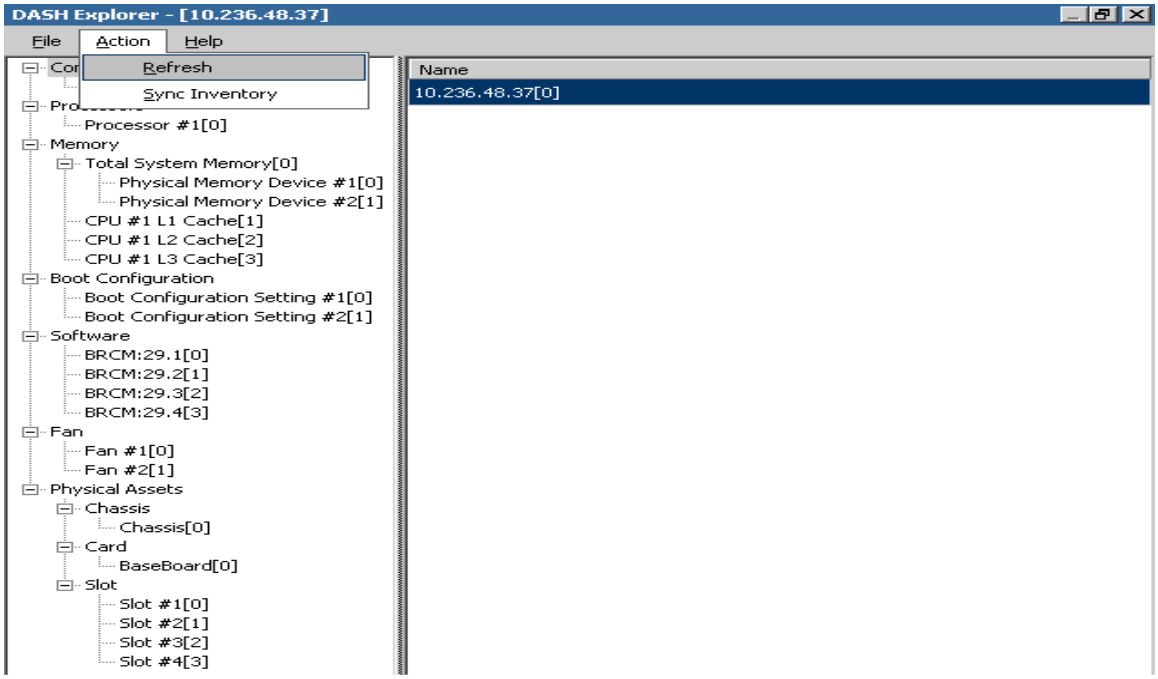

Figure 60. DASH Explorer Menu

7. Example views of different inventory nodes are shown below

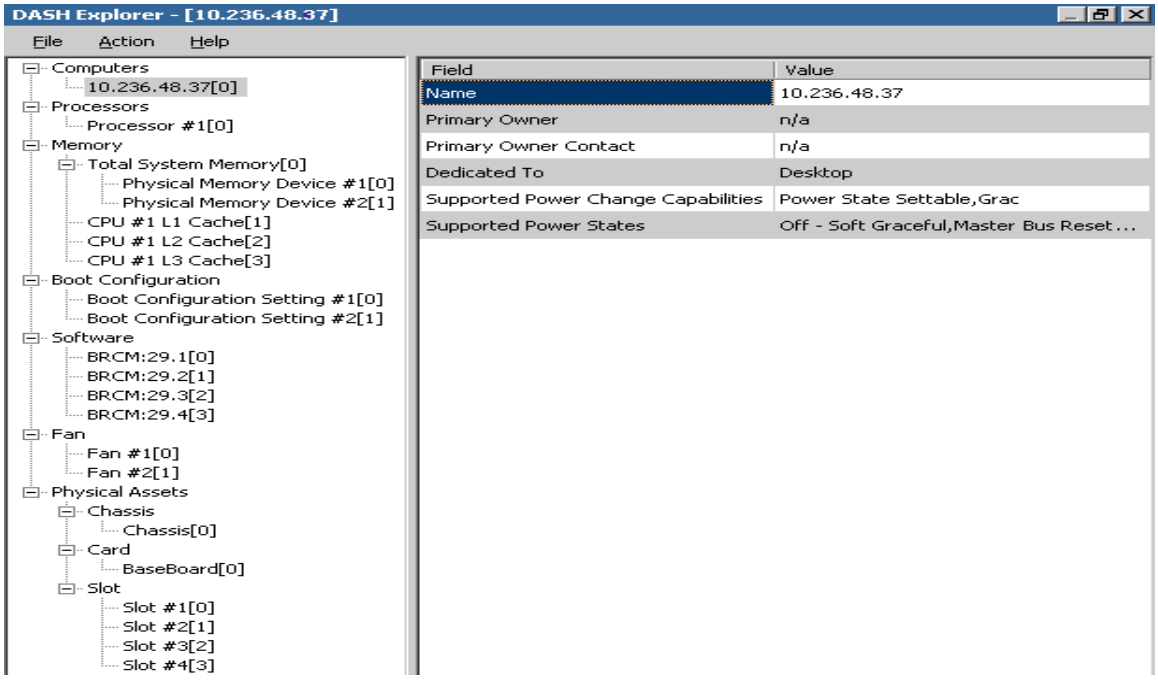

Figure 61. Computers Node in the DASH Explorer

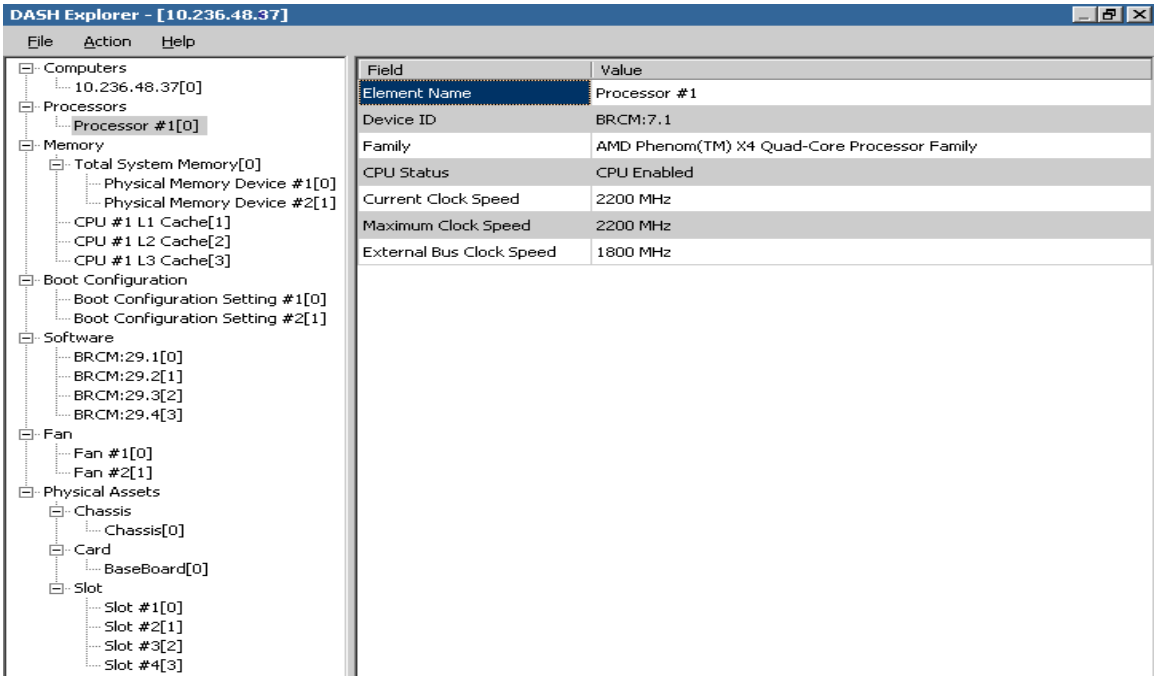

Figure 62. Processor Node in the DASH Explorer

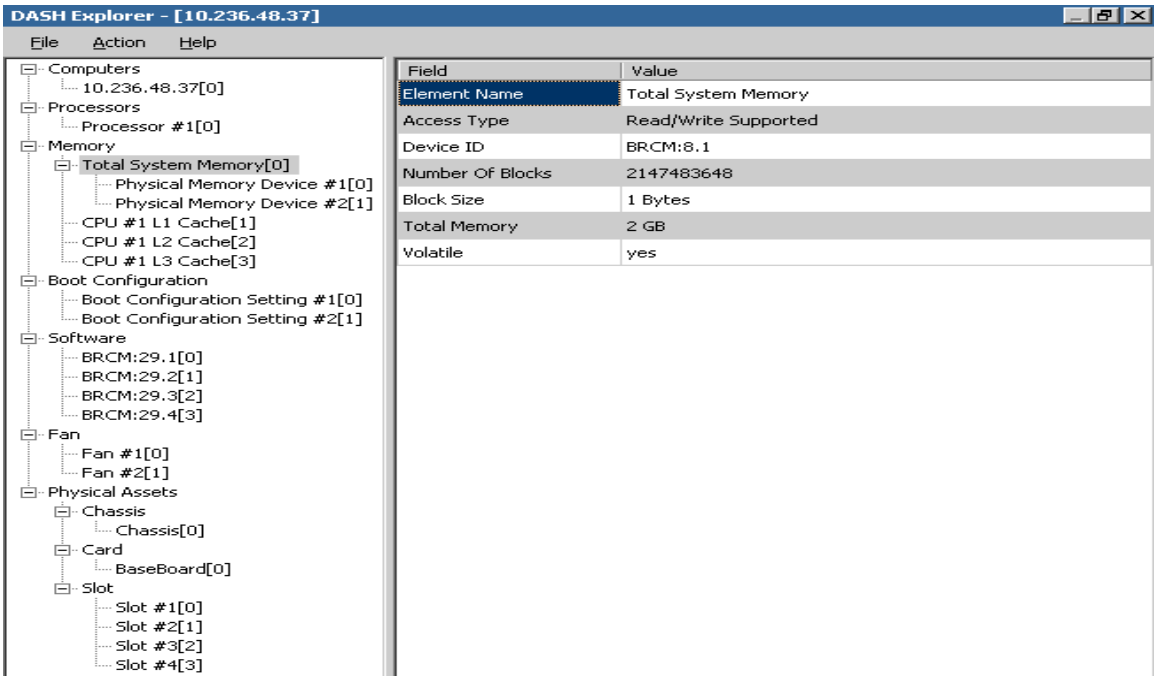

Figure 63. Memory Node in the DASH Explorer

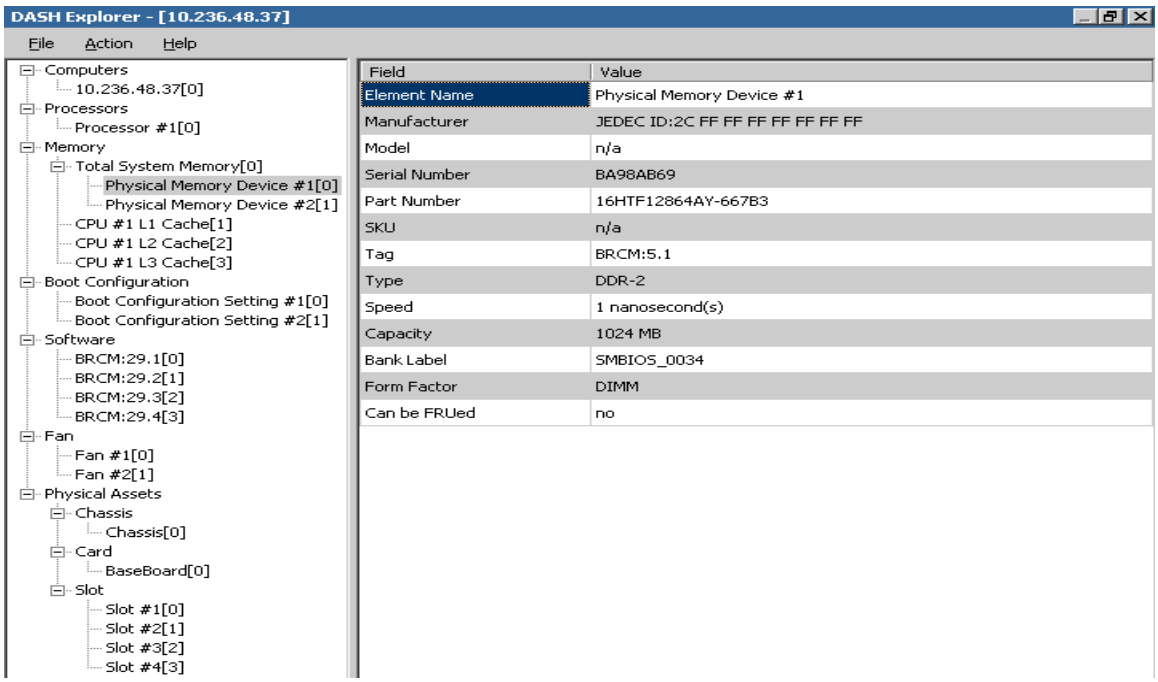

Figure 64. Physical Memory Node in the DASH Explorer

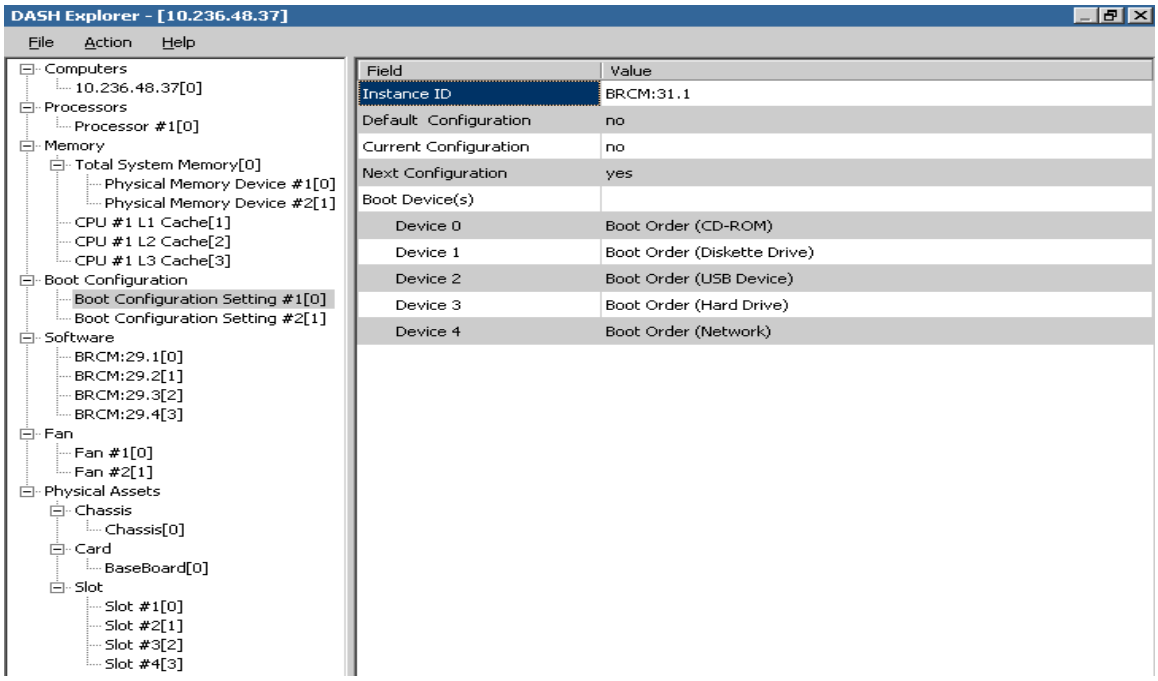

Figure 65. Boot Configuration Node in the DASH Explorer

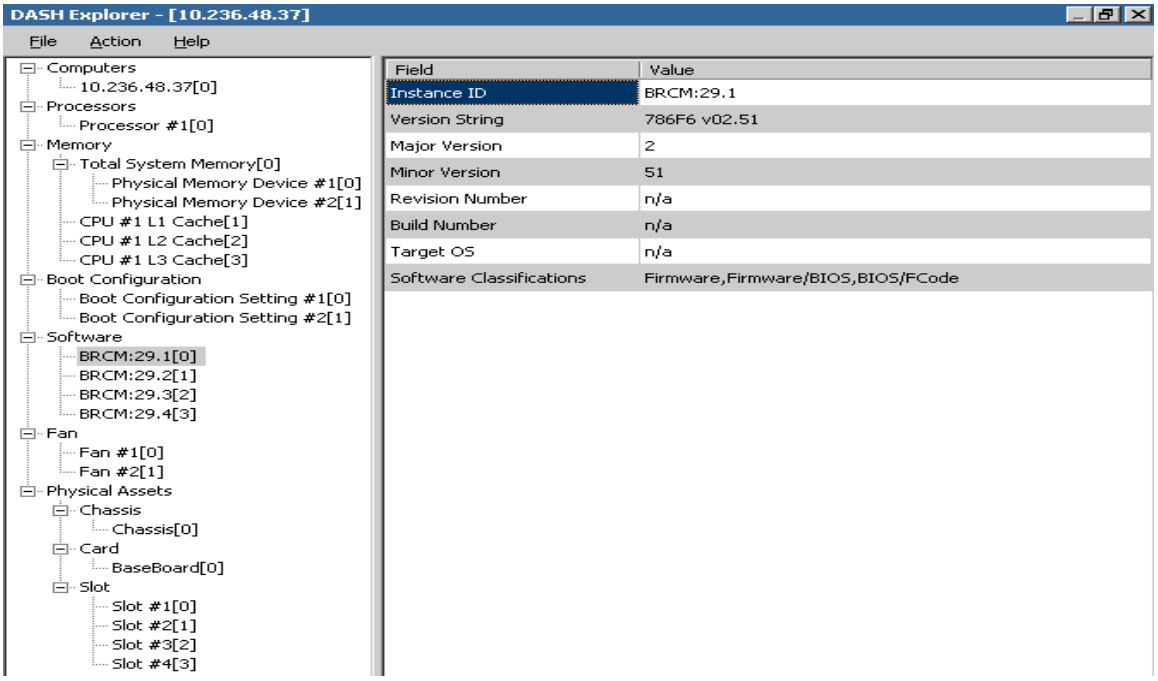

Figure 66. Software Node in the DASH Explorer

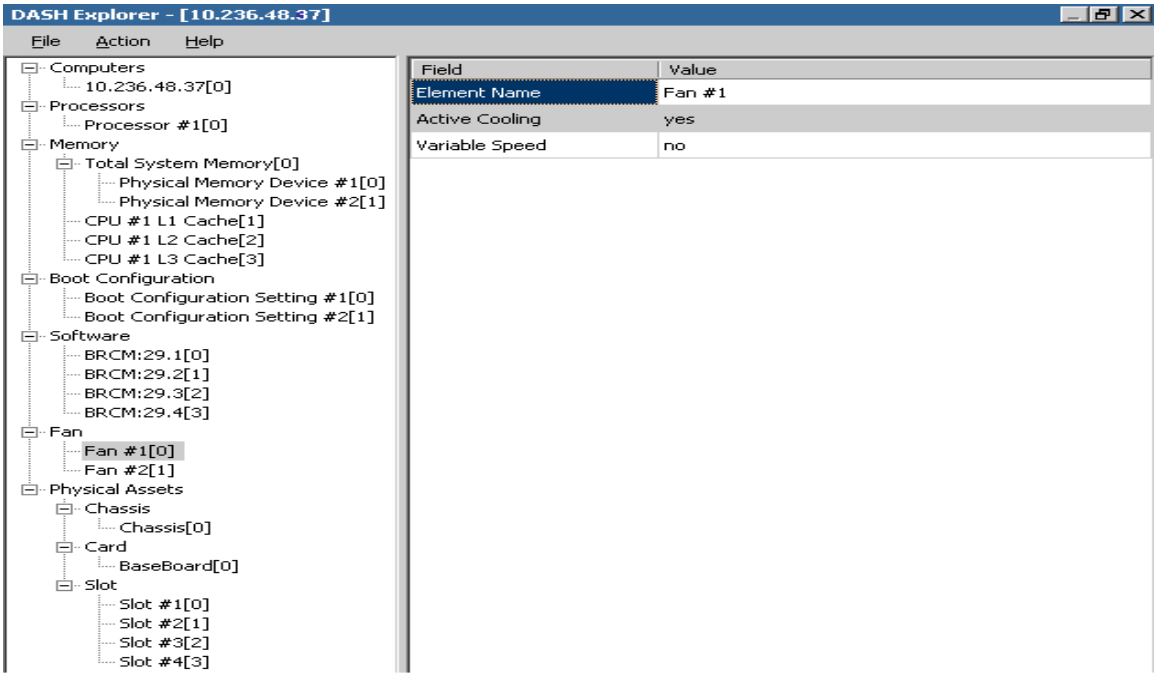

Figure 67. Fan Node in the DASH Explorer

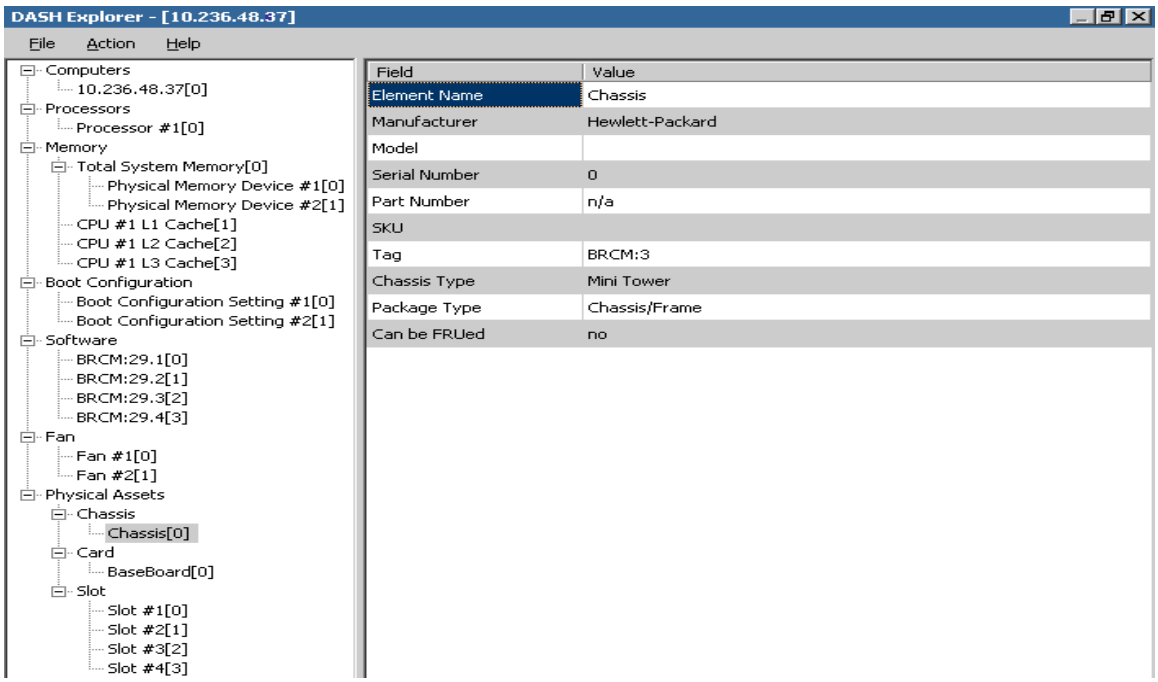

Figure 68. Chassis Node in the DASH Explorer

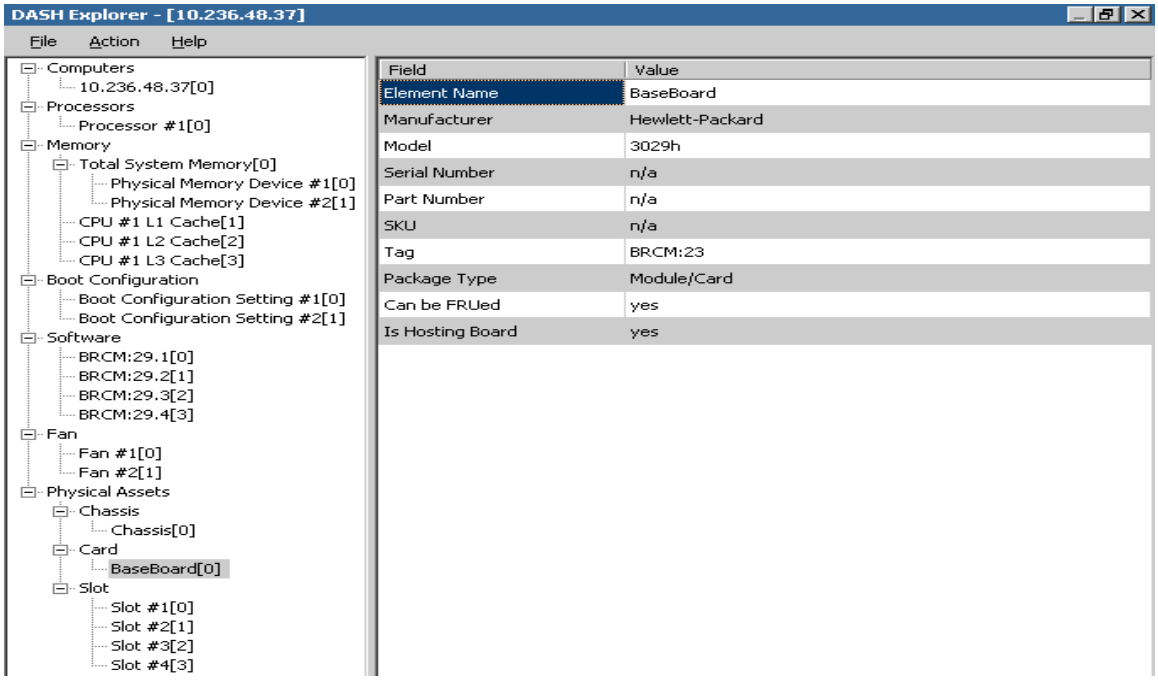

Figure 69. Card Node in the DASH Explorer

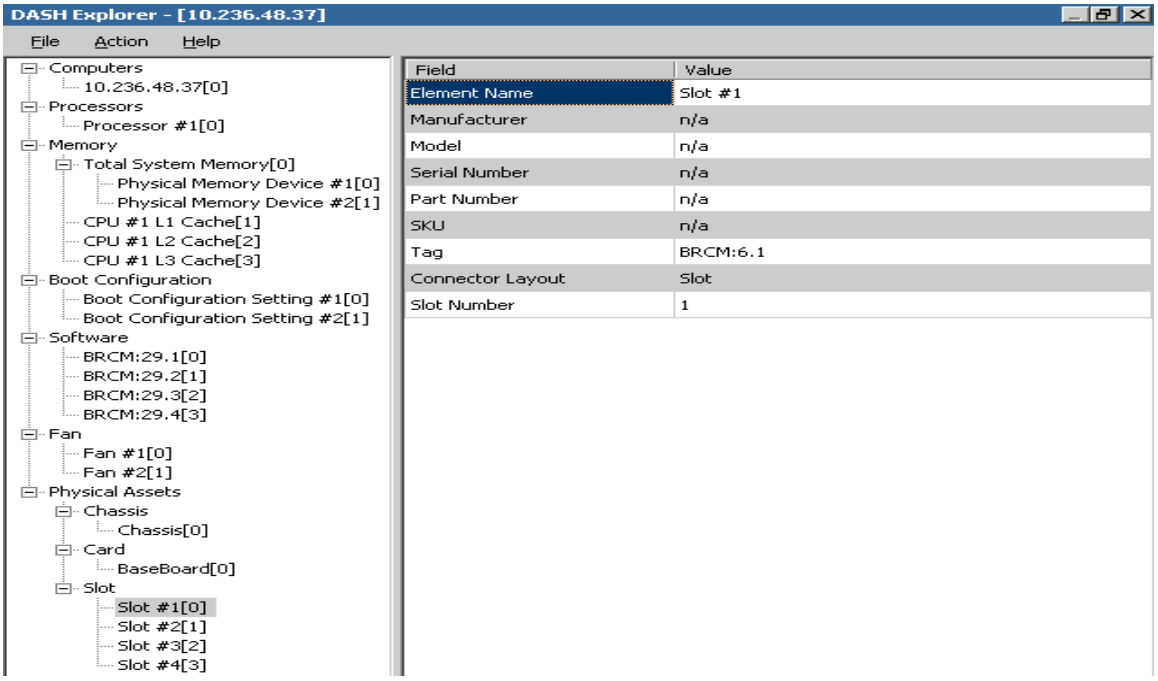

Figure 70. Slot Node in the DASH Explorer

Chapter 11 DASH Queries Node

The queries node allows selecting query for "All DASH Capable Systems" and "All DASH Capable systems that are not clients". This node is available in SCCM Queries.

Follow the steps outlined below to use this feature:

1. Traverse to System Center Configuration Manager -->Site Database --> Computer Management -->Queries node.
2. Click on the "All DASH Capable Systems" or "All DASH Capable systems that are not clients" query node.
3. Query result is displayed in result pane as shown in Figure 71 below.

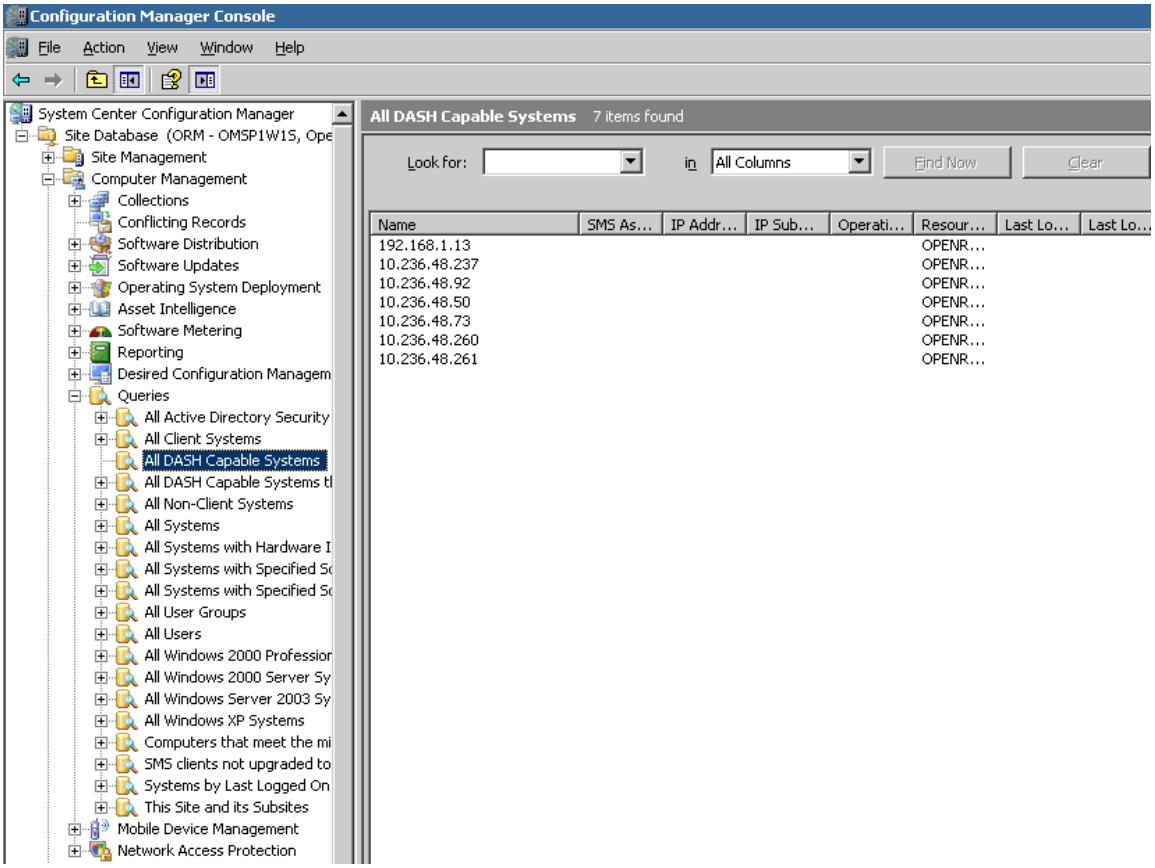

Figure 71. DASH Queries Node

Query	Description
All DASH Capable Systems	Collect the information about All DASH Capable Systems. This will collect information for those DASH clients that have the SCCM agent installed.
All DASH Capable Systems that are not Clients	Collect the information about All DASH Capable Systems that are not Clients. These are client systems that do not have the SCCM agent installed.

Table 4. Queries Table

Chapter 12 DASH Reporting Node

The reporting node provides predefined reports that can be used as it is or that can be modified to meet specialized needs, as well as custom reports and dashboards can be created to meet even more specific needs.

The DASH plug-in creates the following two reports types:

1. All DASH Capable Systems.
2. All DASH Capable Systems that are not clients.

Follow the steps outlined below to create reports

1. Traverse to System Center Configuration Manager-->Site Database --> Computer Management --> Reporting.

2. Select the "Reports" node.

3. Right click "All DASH Capable Systems" and "All DASH Capable Systems that are not clients" report and select "Run" to create the report as shown in Figure 72 below.

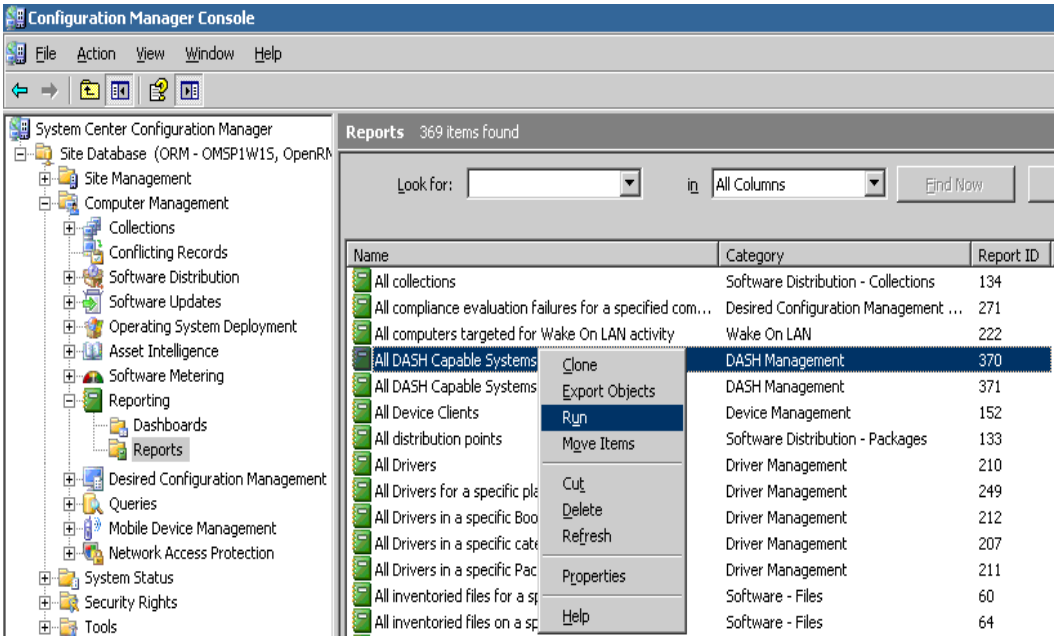

Figure 72. DASH Reporting Node

4. The report result is displayed in the result pane as shown in Figure 73.

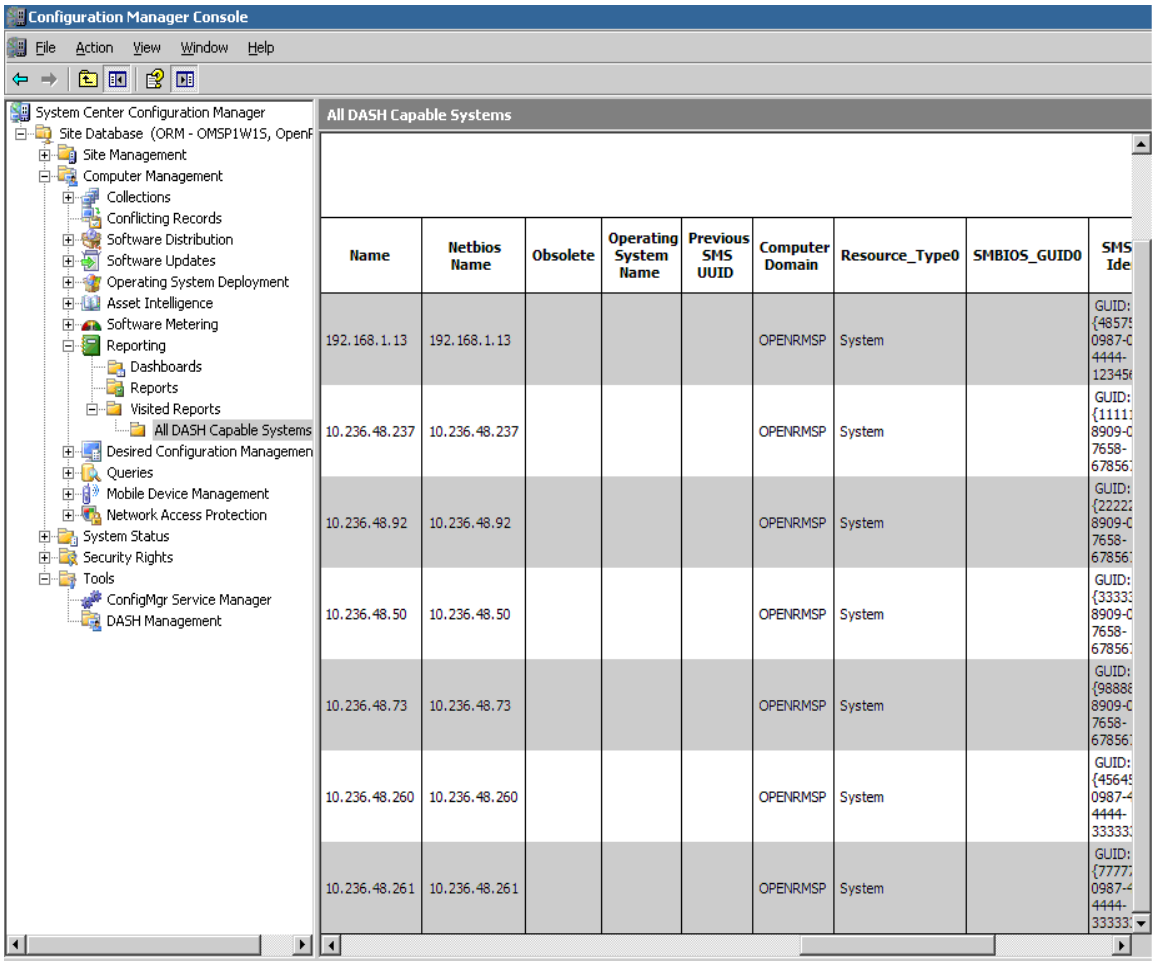

Figure 73. Report Result

Reports types are explained in Table 5 below.

Report	Description
All DASH Capable Systems	Create Report for All DASH Capable Systems. These are clients that have the SCCM agent installed.
All DASH Capable Systems that are not Clients	Create Reports for All DASH Capable Systems that are not Clients. These are clients that do not have the SCCM agent installed.

Table 5. Reporting table